

three eighths inch = one foot

one eighth inch = one foot

one quarter inch = one foot

three sixteenths inch = one foot

one half inch = one foot

three quarters inch = one foot

one inch = one foot

one and one half inches = one foot

three inches = one foot

VA FORM 08-6231

VA 2015/11/2/22 - VA NCA Chapel Renovation/5 SDraft/ST ABBREVIATIONS, SYMBOLS AND SHEET INDEX.dwg 6-08-16 02:18:19 PM J.Chouery

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ABBREVIATIONS

SYMBOLS

AB ANCHOR BOLT

ACI AMERICAN CONCRETE INSTITUTE

ADDL ADDITIONAL

ADJ ADJACENT

AESS ARCHITECTURAL EXPOSED STRUCTURAL STEEL

AGGR AGGREGATE

ASCC AMERICAN INSTITUTE OF STEEL CONSTRUCTION

ALT ALTERNATE

ALUM ALUMINUM

ANCH ANCHOR

ANSI AMERICAN NATIONAL STANDARDS INSTITUTE

APA AMERICAN PLYWOOD ASSOCIATION

APPVD APPROVED

APPROX APPROXIMATE

ARCH ARCHITECTURAL; ARCHITECT

ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS

AWPA AMERICAN WOOD PRESERVERS ASSOCIATION

AWIS AMERICAN WELDING SOCIETY

AISC AMERICAN INSTITUTE OF TIMBER CONSTRUCTION

AND AND

AT AT

BLDG BUILDING

BLK BLOCK

BLKG BLOCKING

BM BEAM

BN BOUNDARY NAIL

BNDRY BOUNDARY

BOT or B BOTTOM

BRC BRACE

BRG BEARING

BTWN BETWEEN

CANT CANTILEVER

CC CENTER TO GRAVITY

CG CENTER OF GRAVITY

CIP CAST-IN-PLACE

CJ CONSTRUCTION JOINT; CONTROL JOINT

CL CENTER LINE

CLR CLEARANCE; CLEAR

CMU CONCRETE MASONRY UNIT

COL COLUMN

COMP COMPRESSION

CONC CONCRETE

CONN CONNECTION; CONNECT

CONSTR CONSTRUCTION

CJP - CP COMPLETE JOINT PENETRATION WELD

CTSK COUNTERSINK; COUNTERSUNK

CU FT CUBIC FOOT

DBL PENNY (NAIL OR BAR DIA)

DEPT DEPARTMENT

DET DETAIL

DF DOUGLAS FIR/LARCH

DIA or Ø DIAGONAL

DIAG DIAPHRAGM

DM DIMENSION

DN DOWN

DWG DRAWING

DWL DOWEL

EA EACH

EF EACH FACE

EJ EXPANSION JOINT

EL or ELEV ELEVATION

1a EL 100'-0"

1a PER ELEV

ELEC ELECTRICAL

EMBED EMBEDMENT

EN EDGE NAIL

ENGR ENGINEER

EQ EQUIPMENT

ETC ET CETERA

EW EACH WAY

EXST or (E) EXISTING

EXT EXTERIOR

FDN FOUNDATION

FF FINISHED FLOOR

FIN FINISH

FJ FLOOR JOIST

FL FLOOR LINE

FLG FLANGE

FLR FLOOR

FN FIELD NAIL

FOC FACE OF CONCRETE

FOM FACE OF MASONRY

FOS FACE OF STUD

FOW FACE OF WALL

FP FRAMING

FT FOOT; FEET

FTG FOOTING

GA GAUGE

GALV GALVANIZED

GB GRADE BEAM

GLB GLUE LAMINATED BEAM

GR GRADE

GRND GROUND

HORIZ HORIZONTAL

HDF HEADER

HGR HANGER

HOSP HOSPITAL

HP HIGH POINT

HS HIGH STRENGTH

HSB HORIZONTALLY SLOTTED HOLES

HT HEIGHT

ID INSIDE DIAMETER

I-JST I-JOIST

IN INCLUDE

INCL INCLUDE

INFO INFORMATION

INSP INSPECTION

INT INTERIORS

JST JOISTS

JT JOINT

K KIPS

KSI KIPS PER SQUARE INCH

LAB LABORATORY

LB(S) or # POUNDS(S)

LF LINEAR FOOT

LIN LINEAL; LINEAR

LLB LONG LEGS BACK-TO-BACK

LLH LONG LEG HORIZONTAL

LLV LONG LEG VERTICAL

LP LOW POINT

LS LATERAL SYSTEM (ELEMENT)

LT WT LIGHTWEIGHT

LVL LEVEL

MATL MATERIAL

MAX MAXIMUM

MB MACHINE BOLT

MC MISCELLANEOUS CHANNEL SHAPE

MF MOMENT FRAME (ELEMENT)

MECH MECHANICAL

MFR MANUFACTURER

MIN MINIMUM; MINUTE

MISC MISCELLANEOUS

(N) NEW

NIC NOT IN CONTRACT

NORM NORMAL

NO or # NUMBER

NTS NOT TO SCALE

OC ON CENTER

OD OUTSIDE DIAMETER

OH OPPOSITE HAND

OPNG OPENING

OPP OPPOSITE

ORIG ORIGINAL

OSB ORIENTED STRAND BOARD

PARA OR / PARALLEL

PC PRECAST; PIECE

PERP PERPENDICULAR

PI PLWOOD INDEX

P PLATE

PL PROPERTY LINE

PLF POUNDS PER LINEAL FOOT

PLCS PLACES

PLY PLYWOOD

PT POST TENSIONED

PJP - PP PARTIAL JOINT PENETRATION WELD

PREFAB PREFABRICATED

PSF POUNDS PER SQUARE FOOT

PSI POUNDS PER SQUARE INCH

PVC POLYVINYL CHLORIDE

PVMT PAVEMENT

# POUND; NUMBER

RBS REDUCED BEAM SECTION

REF REFERENCE

REINF REINFORCE; REINFORCING

REDD REQUIRED

RF ROOF

SCHED SCHEDULE

SECT SECTION

SEP SEPARATION

SHT SHEET

SHTG SHEATING

SIM SIMILAR

SLBB SHORT LEGS BACK-TO-BACK

SOG SLAB ON GRADE

SN SHEAR NAIL

SPCG SPACING

SPECS SPECIFICATIONS

SPCL SPECIAL

SQ SQUARE

SS SELECT STRUCTURAL

SSC SPECIAL SEISMIC CERTIFICATION

STAGG STAGGERED

STD STANDARD

STIFF STIFFENERS

STL STEEL

STRUCT STRUCTURAL

STRUCT I STRUCTURAL I

SW SHEAR WALL

SYM SYMMETRICAL

TB TIE BEAM

TEMP TEMPERATURE; TEMPORARY

THK THICKNESS/THICK

THRU THROUGH

T.O. TOP OF

TOC TOP ON CONCRETE

TOF TOP OF FOOTING

TOS TOP OF STEEL

TOW TOP OF WALL

T&B TOP AND BOTTOM

T&G TONGUE AND GROOVE

TSG TAPERED STEEL GRIDDER

TYP TYPICAL

UBC UNIFORM BUILDING CODE

UNO UNLESS NOTED OTHERWISE

UT ULTRA-SONIC TEST

VERT VERTICAL

W/ WITH

W/O WITHOUT

WD WOOD

WP WORK POINT; WATERPROOF

WT WEIGHT; STRUCTURAL TEE SHAPE

WWF WELDED WIRE FABRIC

STRUCTURAL STEEL SHAPES

WF W SHAPE

C AMERICAN STD CHANNEL SHAPE

MC MISC CHANNEL SHAPE

L WT, ST, MT ANGLE SHAPE

PIPE STRUCTURAL TEE SHAPE

PIPE - X STANDARD PIPE SHAPE

PIPE - XX EXTRA STRONG PIPE SHAPE

HSS DBL EXTRA STRONG PIPE SHAPE

STRUCT TUBING SHAPE

SECTION REFERENCE BUBBLE

DETAIL REFERENCE BUBBLE WITH ARROW

DETAIL REFERENCE BUBBLE

FULL HEIGHT SECTION INDICATOR

BUILDING SECTION INDICATOR

ELEVATION OF WALL OR FRAME

NORTH ARROW

SLOPE

EARTH LAYER

STEPPED SURFACE; FLOOR DEPRESSION

SLOPED SURFACE

INDICATES SAND OR GROUT

INDICATES GRAVEL

TOP OF SLAB ELEVATION

WELDED WIRE FABRIC (WWF LAYER)

FOOTING TYPE

INDICATES MASONRY WALLS

STEEL TUBE COLUMN

STEEL PIPE COLUMN

WIDE FLANGE STEEL COLUMN

MEMBER SPLICE

TOP OF STEEL + ELEVATION

NUMBER OF EVENLY SPACED SHEAR STUDS

SPECIAL STUD SPACING SEE TYPICAL STEEL DETAILS

BEAM CAMBER AT MID-SPAN

STEEL IN CROSS SECTION

DIRECTION OF SPAN

BEAM LATERAL BRACE (SINGLE ANGLE)

BEAM LATERAL BRACE (DOUBLE ANGLE)

DRAG STRUT CONNECTION

DRAG STRUT CONNECTION

DRAG STRUT CONNECTION

DRAG STRUT CONNECTION

BOTTOM FLANGE SUPPORT CONNECTION

FULL HEIGHT STIFFENER CONNECTION

GRAVITY MOMENT CONNECTION

REDUCED BEAM SECTION (RBS) MOMENT CONNECTION

No.

Description

Date

CONSULTANTS:

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Seals and Signatures

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4152

EX-096-18

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EST. 1915

PLANNING ARCHITECTURE ENGINEERING INTERIORS

Drawing Title

ABBREVIATIONS, SYMBOLS, AND SHEET INDEX

Approved Project Director

Project Title

VA Los Angeles National Cemetery, Phase 1A

Location Los Angeles National Cemetery, 950 South Sepulveda Boulevard, Los Angeles, California 90049

Date 06-10-2016

Checked

Drawn

VA Project Number

898CM2032

Building Number

1001

Drawing Number

S1

Dwg. of

Office of Construction and Facilities Management

Department of Veterans Affairs



### STRUCTURAL NOTES

## GENERAL

- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.

  2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
  3. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
  4. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES:
 

2012 INTERNATIONAL BUILDING CODE REFERRED TO HERE AS "THE CODE", AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE DEPARTMENT OF VETERAN AFFAIRS STANDARD DVA H-18-B.
  5. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
 

SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED.

SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING PARTITIONS.

SIZE AND LOCATION OF ALL CONCRETE CURBS, EQUIPMENT PADS, PITS, FLOOR DRAINS, SLOPES, DEPRESSIONS AREAS, CHANGE IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.

SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS EXCEPT AS SHOWN.

FLOOR AND ROOF FINISHES.

DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
  6. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
 

PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.

ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.

CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.

SIZE AND LOCATION OF MACHINE OR EQUIPMENT AND EQUIPMENT PADS
  7. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
  8. OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, WALLS, UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS. FOR ANY FURTHER RESTRICTIONS ON OPENINGS IN STRUCTURAL ELEMENTS, SEE APPLICABLE SECTIONS BELOW.
  9. OPENINGS, POCKETS, ETC., SMALLER THAN 6" MAY BE PLACED IN EXISTING CONCRETE SLABS, DECKS, WALLS, PROVIDED NO EXISTING REINFORCEMENTS ARE CUT. MULTIPLE OPENINGS SHALL NOT BE PLACED CLOSER THAN 30" O.C. USE NON-DESTRUCTIVE METHODS TO LOCATE EXISTING REINFORCING BARS. DO NOT CUT EXISTING REINFORCING BARS WHICH MAY COMPLY WITH OPENING LOADS UNLESS SPECIALLY APPROVED BY THE ENGINEER.
  10. CONDUITS LARGER THAN 1-1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIALLY APPROVED. NO CONDUITS SHALL BE PLACED IN CONCRETE FILL OVER METAL DECKING AND NO PIPES SHALL BE EMBEDDED IN CONCRETE.
  11. ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE OF THE LATEST REVISION.
  12. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC., IF ANY SUCH STRUCTURES ARE FOUND, STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
  13. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
  14. THE CONTRACTOR SHALL VERIFY THE EXTENT AND LOCATIONS OF SITE UTILITIES PRIOR TO EXCAVATION OR SHORING. SINCE THE SURVEY WAS BASED ENTIRELY ON PUBLIC RECORDS, THERE MAY BE DISCREPANCIES BETWEEN THE LOCATION INDICATED ON THE SITE SURVEY AND ACTUAL VERIFIED LOCATIONS. IF THE ACTUAL FIELD VERIFIED LOCATION OF UTILITIES COULD RESULT IN A CONFLICT WITH THE SHORING, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
  15. HEAVY EQUIPMENT, CRANES AND MATERIAL STOCKPILES SHALL NOT BE LOCATED ON OR ADJACENT TO SHORING UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
  16. CONTRACTOR SHALL COORDINATE SHORING WITH DRAWINGS OF RECORD TO INSURE PROTECT STRUCTURES, BLOCKOUTS, OFFSETS, STEPPED FOOTINGS AND ANY OTHER ITEMS AFFECTED BY THE SHORING.
  17. AN UNDERGROUND SERVICE ALERT INQUIRY IDENTIFICATION NUMBER MUST BE OBTAINED AT LEAST TWO WORKING DAYS BEFORE STARTING WORK WITH THIS PERMIT. TELEPHONE NO. 1-800-422-4133.
  18. STOCK PILING OR STORAGE OF MATERIAL ON OR NEAR SHORING BULKHEAD IS NOT PERMITTED.
  19. SEE ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS DRAINAGE AND WATERPROOFING.
  20. DESIGN LOADS:
 

<u>MEP UNIT WEIGHT:</u>	
RTU-1:	1350 Lbs
CUV-1:	550 Lbs

<u>LIVE LOADS:</u>	
EXISTING FLOOR	60 PSF + 25 PSF (PARTITION)
ROOF	20 PSF
  21. WIND ANALYSIS PER SECTION 1609 OF THE 2012 IBC  
BASIC WIND SPEED (3 SECOND GUST)  $V_{ULT} = 110$  MPH, EXPOSURE B, RISK CATEGORY II.
  22. SEISMIC ANALYSIS PER SECTION 1613 OF THE 2012 IBC AND H-18-B VA SEISMIC DESIGN REQUIREMENTS  
RISK CATEGORY II.  
 SITE CLASS D  
 $S_{as} = 2.239, S_1 = 0.822$   
 $S_{d1} = 1.493, S_{d2} = 0.822$   
 $I = 1.0$   
 $I_p = 1.0$   
 SEISMIC DESIGN CATEGORY D

## SPECIAL INSPECTIONS

THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL HAVE CONTINUOUS INSPECTION BY A BUILDING INSPECTOR APPROVED BY CITY OF LOS ANGELES.

1. CONCRETE.
2. BOLTS INSTALLED IN CONCRETE.
3. PLACING OF REINFORCING STEEL.
4. ALL STRUCTURAL WELDING, INCLUDING REINFORCING STEEL.
5. HIGH STRENGTH BOLTING.
6. EXPANSION ANCHOR.

## CONCRETE

1. ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH CHAPTER 19 OF THE CODE AND WITH THE PROVISIONS OF ACI 318-11
2. REINFORCED CONCRETE IS DESIGNED BY THE "ULTIMATE STRENGTH DESIGN METHOD".
3. CONCRETE MIXES SHALL BE DESIGNED BY THE APPROVED TESTING LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER. THE COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE PROPORTIONED BASED ON SECTION 1905 OF THE CODE.
4. SCHEDULE OF STRUCTURAL CONCRETE 28-DAY STRENGTH AND TYPES:

LOCATION IN STRUCTURE	STRENGTH (PSI)	DENSITY (PCF)	REMARKS
ALL CONC (NWT)	3000	150	
5. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II.
6. AGGREGATE FOR HARDWORK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C-33 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH PERMISSION OF THE STRUCTURAL ENGINEER.
7. CONCRETE MIXING OPERATION, ETC. SHALL CONFORM TO ASTM C-94.
8. PLACEMENT OF CONCRETE SHALL CONFORM TO CODE SECTION 1905 AND PROJECT SPECIFICATIONS. CLEAN AND ROUGHEN TO 1/4" AMPLITUDE ALL CONCRETE SURFACES AGAINST WHICH NEW CONCRETE IS TO BE PLACED.
9. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
10. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS. SEE THE DRAWINGS FOR ADDITIONAL RESTRICTIONS ON THE PLACEMENT OF OPENINGS IN SLABS AND WALLS.
11. CONDUITS AND PIPE SLEEVES SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS, SPACE EMBEDDED CONDUITS AND SLEEVES AT A MINIMUM CLEAR SPACING OF 3 DIAMETERS.

LOCATION IN STRUCTURE	STRENGTH (PSI)	DENSITY (PCF)	REMARKS
ALL CONC (NWT)	3000	150	-

## REINFORCING STEEL (FOR CONCRETE)

1. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 19 OF THE CODE, ASTM A706, GRADE 60 UNO. DEFORMATIONS SHALL BE IN ACCORDANCE WITH ASTM A-305.
  2. BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
  3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. PROVIDE LAPS AS PER THE CODE, 9" MINIMUM. WWP SHALL BE SUPPORTED ON APPROVED CHAIRS.
  4. REINFORCING BAR SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS. MINIMUM SPLICE LENGTH FOR REINFORCING STEEL BARS IN CONCRETE SHALL BE AS PER THE CODE. LAP ALL HORIZONTAL BARS AT CORNERS AND INTERSECTIONS. STAGGER ALL SPLICES UNLESS NOT OTHERWISE ON PLANS.
  5. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
  6. WHERE WELDING OF REINFORCING IS APPROVED BY THE STRUCTURAL ENGINEER, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING EXXOK OR APPROVED ELECTRODES. WELDING PROCEDURES SHALL CONFORM TO THE CODE, SECTION 10 OF THE STRUCTURAL WELDING CODE- REINFORCING STEEL, AWS-D14, LATEST REVISION. REINFORCING BARS TO BE WELDED SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-706.
  7. BARS IN SLABS SHALL BE SECURELY SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, PRIOR TO PLACING CONCRETE.
  8. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "A.C.I. CODE OF STANDARD PRACTICE" FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.
  9. COMPLETE AND DETAILED REINFORCEMENT DRAWINGS SHALL BE PREPARED AND SUBMITTED TO THE ARCHITECT FOR REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION IN ACCORDANCE WITH THE SPECIFICATION AND ALL APPLICABLE CODES. THESE DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO PLACING OF CONCRETE.
  10. MILL TEST REPORTS FOR GRADE 60 BARS SHALL BE SUBMITTED PRIOR TO PLACEMENT OF CONCRETE.
  11. CONTINUOUS INSPECTION OF CONCRETE SHALL INCLUDE INSPECTION DURING INSTALLATION OF REINFORCING STEEL. INSPECTION SHALL BE SCHEDULED SO THAT PLACEMENT OF REINFORCING STEEL, CONDUIT, SLEEVES, AND SPEEDWALLS IS NOT DEFERRED PRIOR TO PLACEMENT OF OVERLYING GRIDS OR REINFORCING STEEL.
  12. CONCRETE PROTECTION FOR REINFORCEMENT
- CAST-IN-PLACE CONCRETE (NON-PRESTRESSED), THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:

A.	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
B.	CONCRETE EXPOSED TO EARTH OR WEATHER: NO. 6 THROUGH NO. 11 BAR NO 5 BAR, W31 OR D31 WIRE & SMALLER	2 1-1/2
C.	CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS: NO. 11 BAR & SMALLER  BEAMS, COLUMNS:  PRIMARY REINFORCEMENT TIES, STIRRUPS, SPIRALS	3/4   1-1/2

## STRUCTURAL STEEL

- |     |   |                     |
|-----|---|---------------------|
| 1.  | STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED BY AN APPROVED AND LICENSED FABRICATOR IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (2010 EDITION), AND WITH CHAPTER 22 OF THE CODE.   |                     |
| 2.  | ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION AS INDICATED BELOW (UNO):  |                     |
|     | WF SHAPES   | A992 OR A572, GR50  |
|     | PLATES (AS NOTED ON DRAWINGS)   | A572, GR50          |
|     | CONNECTION PLATES, AND MISCL.   | A-36 U.N.O.         |
|     | HOLLOW STRUCTURAL SECTIONS  | A-500, GRADE B      |
|     | BOLTS   | A325M UNO           |
|     | BOLTS IN CONCRETE   | F1554, GR 36 U.N.O. |
|     | ANGLES, CHANNELS, WT SHAPES   | A-36                |
| 3.  | THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS TO THE ARCHITECT OF ALL STEEL FOR ARCHITECTS AND STRUCTURAL ENGINEERS REVIEW AND APPROVAL. BEFORE FABRICATION.  |                     |
| 4.  | BOLT HOLES USED IN STEEL SHALL BE 1/16" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED, EXCEPT AS NOTED.   |                     |
| 5.  | ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE, OR MASONRY, SPRAY ON FIREPROOFING, OR ARE ENCASED BY BUILDING FINISH, SHALL BE LEFT UNPAINTED.  |                     |
| 6.  | ALL WELDINGS IS TO BE DONE BY CERTIFIED WELDERS USING E70XX ELECTRODES (UNO). ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND THE CODE FOR WELDING IN BUILDING CONSTRUCTION (AWS D1.1 LATEST) REVISION OF THE AMERICAN WELDING SOCIETY. SEE SPECIAL INSPECTIONS SECTION FOR WELDING INSPECTION REQUIREMENTS. |                     |
| 7.  | WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED, WHERE FILLET WELD SHALL BE GIVEN WITHOUT INDICATION OF SIZE. USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC MANUAL OF STEEL CONSTRUCTION SECTION J2.   |                     |
| 8.  | ALL EXPOSED STRUCTURAL STEEL AND MISCELLANEOUS METAL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.   |                     |
| 9.  | THE USE OF E70-T4 WELDING WIRE IS NOT ALLOWED FOR ANY APPLICATION.  |                     |
| 10. | ALL WELD FILLER MATERIAL SHALL HAVE A MINIMUM CHARPY V-NOTCH (CVN) VALUE OF 20 FT-LBS AT A TEMPERATURE OF 0°F.  |                     |
| 11. | 100 PERCENT ULTRASONIC TESTING FOR ALL COMPLETE JOINT PENETRATION GROOVE WELDS IS REQUIRED.   |                     |

STEEL DECK

1. ROOF AND FLOOR DECKS SHALL BE AS NOTED ON THE DRAWINGS. PROPERTIES ARE AS FOLLOWS:
- | DECK SIZE AND GAUGE | (I/N4) | +S(N3) | -S(N3) |
|---------------------|--------|--------|--------|
| 1-1/2" x 18 GA DECK | 0.302  | 0.322  | 0.335  |
2. DECK SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND SHALL INDICATE STUD LAYOUT.
3. THE AMERICAN IRON AND STEEL INSTITUTE "SPECIFICATIONS FOR THE DESIGN OF LIGHT GAGE STEEL STRUCTURAL MEMBERS" SHALL GOVERN THE DESIGN OF ALL DECK UNITS. STEEL DECK AND ALL OF ITS CLOSURES AND FLASHINGS SHALL CONFORM TO ASTM A653 SS, GRADE 33, FY = 38,000 PSI MINIMUM.
4. ACCEPTABLE STEEL DECK MANUFACTURERS ARE AS FOLLOWS:
- |                          |                 |
|--------------------------|-----------------|
| VERCO MANUFACTURING INC. | (ICC ESR-1735P) |
| ASC STEEL DECK           | (ICC ESR-1414)  |
5. UNITS SHALL BE CONTINUOUS OVER THREE OR MORE SPANS, EXCEPT WHERE THE FRAMING DOES NOT PERMIT. SHORING MAY BE REQUIRED AT NON-CONTINUOUS SPANS. DECK SHOP DRAWINGS SHALL INDICATE WHERE SHORING WILL BE REQUIRED. DECK SHALL BEAR A 2" MINIMUM AT ALL SUPPORTS. ALL DECKS FOR INTERIOR FLOORS SHALL HAVE VENT TABS FOR CONCRETE VENTILATION.
6. ALL WELDING OF STEEL DECK SHALL BE DONE BY CERTIFIED LIGHT GAGE WELDERS IN ACCORDANCE WITH AWS "SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES", AWS D13.1 LATEST EDITION.
7. UNITS SHALL BE FASTENED TO THE STEEL SUPPORTS AT ALL OF THE UNITS AND AT INTERMEDIATE SUPPORTS AND TO THE STEEL SUPPORTS AT THE SIDE BOUNDARIES BY 3/4" DIAMETER PUDDLE WELDS AT 1'-0" OC.
8. THE SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BETWEEN SUPPORTS BY BUTT JUNCTION PUNCHING.
9. PROVIDE FLASHING AND CLOSURE PLATES AT ENDS OF ALL UNITS, AROUND COLUMNS, AND AT ALL PERIMETER LOCATIONS REQUIRING CONCRETE.
10. ALLOWABLE LOADS FOR DECK PER VERCO CATALOG (ICC ESR-1735P).

### POST-INSTALLED ANCHORS

STRENGTH DESIGN CAPACITIES (SEISMIC) FOR CARBON HILTI KWIK-BOLT TZ IN CONCRETE.  
(TYPICAL INSTALLATIONS PER ICC REPORT ESR-1917)

CARBON		3000psi	4000psi	6000psi	ALL PSI	TORQUE TEST VALUE  (FT-Lb)
DIA.	hef	TENS (lbs) 1,2,3,4,5,6 (Ø Nn)	TENS (lbs) 1,2,3,4,5,6 (Ø Nn)	TENS (lbs) 1,2,3,4,5,6 (Ø Nn)	SHEAR 1,4,5,6 (Ø Nn)	
3/8	2	1,212	1,400	1,714	1,099	25
1/2	2	1,284	1,483	1,816	3,122	40
	3 1/4	2,625	3,031	3,712		
5/8	3 1/8	2,508	2,896	3,546	5,146	60
	4	3,631	4,193	5,136		
3/4	3 3/4	3,296	3,806	4,662	6,944	110
	4 3/4	4,699	5,426	6,646		

NOTES:

1. VALUES ARE FOR SINGLE ANCHORS WITH MINIMUM SPACING OF 3shf BETWEEN ADJACENT ANCHORS AND MINIMUM EDGE DISTANCE OF 1.5shf OR Ccr. (NO EDGE DISTANCE OR SPACING REDUCTION). FOR GROUPS OF ANCHORS AND/OR SPACING AND EDGE DISTANCES LESS THAN INDICATED REFER TO ICC-ESR1917.
2. TENSION VALUES  $\phi_n$  ARE FOR NORMAL WEIGHT CONCRETE, FOR LIGHT-WEIGHT CONCRETE MULTIPLY VALUES BY 0.80.
3.  $\phi$  FACTORS FOR TENSION ARE THE REDUCTION FACTORS FOR CONDITION B WHERE SUPPLEMENTARY REINFORCEMENT IN CONFORMANCE WITH ACI 318-11 SECTION 4.4.4 IS NOT PROVIDED OR WHERE PULLOUT OR PRYOUT STRENGTH GOVERNS. DIA. TENSION= 0.85.
4.  $\phi$  FACTOR FOR SHEAR ARE THE REDUCTION FACTORS FOR STEEL FAILURE MODES OF A DUCTILE STEEL ELEMENT AS DEFINED BY ACI 318 SECTION 1.1.  $\phi$  SHEAR= 0.70.
5. THE VALUES LISTED ARE FOR USE WITH THE LOAD COMBINATIONS OF 2012 IBC.
6. ALL VALUES LISTED FOR CRACKED CONCRETE USING Kcr AS LISTED IN TABLES 3 & 4 OF ICC ESR 1917
7. TABLE APPLIES TO KWIK BOLT T ANCHORS INSTALLED IN CONCRETE SLAB, WALLS, BEAMS.
8. VALUES LISTED ARE FOR ANCHORS SUBJECT TO SEISMIC LOADS. FOR ANCHORS SUBJECT TO STATIC LOADS ONLY, SEE ICC ESR-1917.
9. ANCHOR MAY BE TESTED TO THE FOLLOWING:  
THE TORQUE TEST VALUE LISTED IN TABLE ABOVE BY USE OF A CALIBRATED TORQUE WRENCH.
10. WHEN INSTALLING T ANCHORS, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE REINFORCING BARS.
11. APPLY PROOF TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH AND APPLIED LOAD.
12. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
13. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
  - a. HYDRAULIC RAM METHOD: ANCHORS TESTED WITH A HYDRAULIC JACK OR SPRING LOADED DEVICES SHALL MAINTAIN THE TEST LOAD FOR A MINIMUM OF 15 SECONDS AND SHALL EXHIBIT NO DISCREPANT MOVEMENT DURING THE TENSION TEST, e.g., AS EVIDENCED BY LOOSENING OF THE WASHER UNDER THE NUT.
  - b. TORQUE WRENCH METHOD: ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN 1/2 TURN OF THE NUT.
14. TESTING SHOULD OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS.
15. SPECIAL INSPECTION IN ACCORDANCE WITH TABLE 1705.3 OF THE IBC SHALL BE PROVIDED FOR ANCHOR INSTALLATIONS.
16. FOR ANCHORS BY BRANDS OTHER THAN THAT LISTED ON THESE DRAWINGS, CONTRACTOR SHALL SUBMIT APPROVED TEST REPORTS FOR ENGINEERS APPROVAL PRIOR TO INSTALLATION, FOR THE PARTICULAR LOCATION OF USE.
17. USE NON-DESTRUCTIVE METHODS TO LOCATE EXISTING REINFORCING BARS. DO NOT CUT EXISTING REINFORCING BARS WHICH MAY CONFLICT WITH ANCHOR LOCATION UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.

### DRILLED ADHESIVE ANCHORS

1. ADHESIVE ANCHORS IN CONCRETE SHALL BE HIT-RE-HIT-500-SD AS MANUFACTURED BY HILTI INC. (ICC ESR-2322)
2. SPECIAL INSPECTION IN ACCORDANCE WITH TABLE 1705.3 OF THE IBC SHALL BE PROVIDED FOR THE HIT-RE-500-SD ANCHOR INSTALLATIONS.
3. INSTALL ANCHORS PER THE INSTALLATION PROCEDURE DESCRIBED IN THE REPORT'S REFERENCED ABOVE WITH CARBIDE-TIPPED DRILL BITS CONFORMING ANSI B212.15.
4. USE NON-DESTRUCTIVE METHODS TO LOCATE EXISTING REINFORCING BARS. DO NOT CUT EXISTING REINFORCING BARS WHICH MAY CONFLICT WITH ANCHOR LOCATION UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.
5. PROOF LOAD TESTS SHALL BE IN ACCORDANCE WITH MANUFACTURER AND CODE REQUIREMENTS.
6. THESE TYPES OF ANCHORS ARE PERMITTED INDOORS WHERE AT LEAST 1 HOUR FIRE RATINGS IS PROVIDED.
7. FOR ANCHORS BY BRANDS OTHER THAN THAT LISTED ON THESE DRAWINGS, CONTRACTOR SHALL SUBMIT APPROVED TEST REPORTS FOR ENGINEER'S APPROVAL PRIOR TO INSTALLATION, FOR THE PARTICULAR LOCATION OF USE.

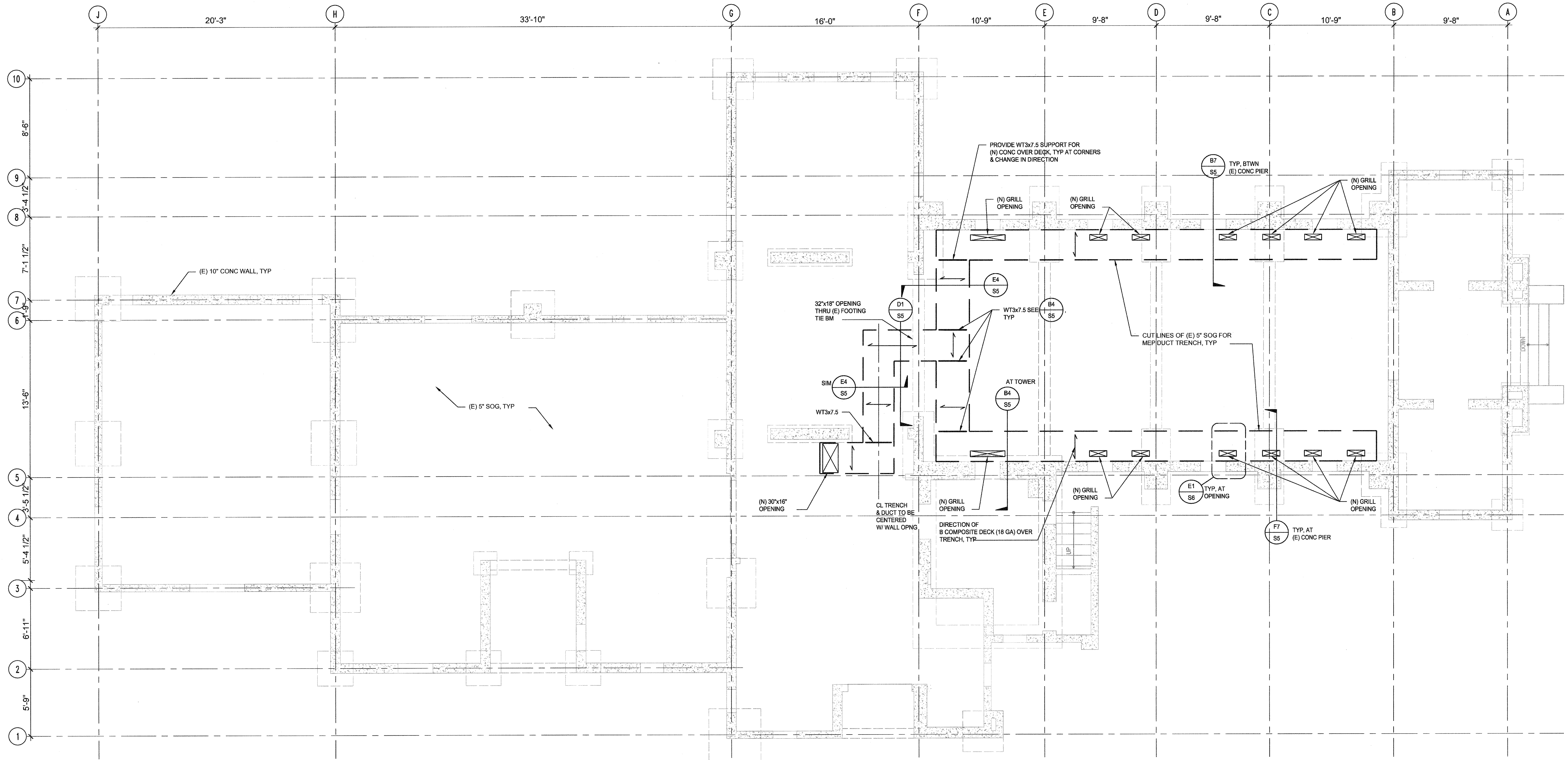
**NON-SPRINKLERED  
CD2 SUBMISSION - ISSUED FOR CONSTRUCTION**

No.	Description	Date	CONSULTANTS:	Seals and Signatures	ARCHITECT/ENGINEERS:	Drawing Title	Project Title	VA Project Number	Office of
			STRUCTURAL ENGINEER		<div>LEO A DAILY</div> <div>PLANNING ARCHITECTURE ENGINEERING INTERIORS</div> <div> EST. 1915</div>	GENERAL NOTES	VA Los Angeles National Cemetery, Phase 1A	898CM2032	Office of
			KPFF 6080 CENTER DRIVE, SUITE 300 LOS ANGELES, CA 90045 Tel 310-665-1536						
						Approved Project Director	Location Los Angeles National Cemetery 950 South Sepulveda Boulevard Los Angeles, California 90049	Drawing Number	Management
							Date 06-10-2016	Checked	
							Drawn	S2	
								Dwg. of	
									 Department of Veterans Affairs

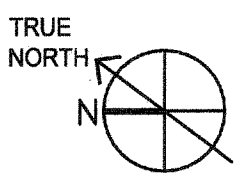


one eighth inch = one foot  
one quarter inch = one foot  
three eighths inch = one foot  
one half inch = one foot  
three quarters inch = one foot  
one inch = one foot  
one and one half inches = one foot  
two inches = one foot  
three inches = one foot

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1 FIRST FLOOR FOUNDATION PLAN  
SCALE = 1/4"=1'-0"



No.	Description	Date

<b>CONSULTANTS:</b>	
STRUCTURAL ENGINEER	
KPFF	
6080 CENTER DRIVE, SUITE 300	
LOS ANGELES, CA 90045	
Tel 310-665-1536	

Seals and Signatures

<b>ARCHITECT/ENGINEERS:</b>	
<b>LEO A DALY</b>	
PLANNING ARCHITECTURE ENGINEERING INTERIORS	
550 South Hope Street, 27 <sup>th</sup> Floor	
Los Angeles, California 90071, USA	
213-629-0100 F213-629-0070	
EST. 1915	

Drawing Title
<b>FIRST FLOOR FOUNDATION PLAN</b>
Approved Project Director

Project Title	
VA Los Angeles National Cemetery, Phase 1A	
Location	Los Angeles National Cemetery, 950 South Sepulveda Boulevard Los Angeles, California 90049
Date	06-10-2016
Checked	
Drawn	

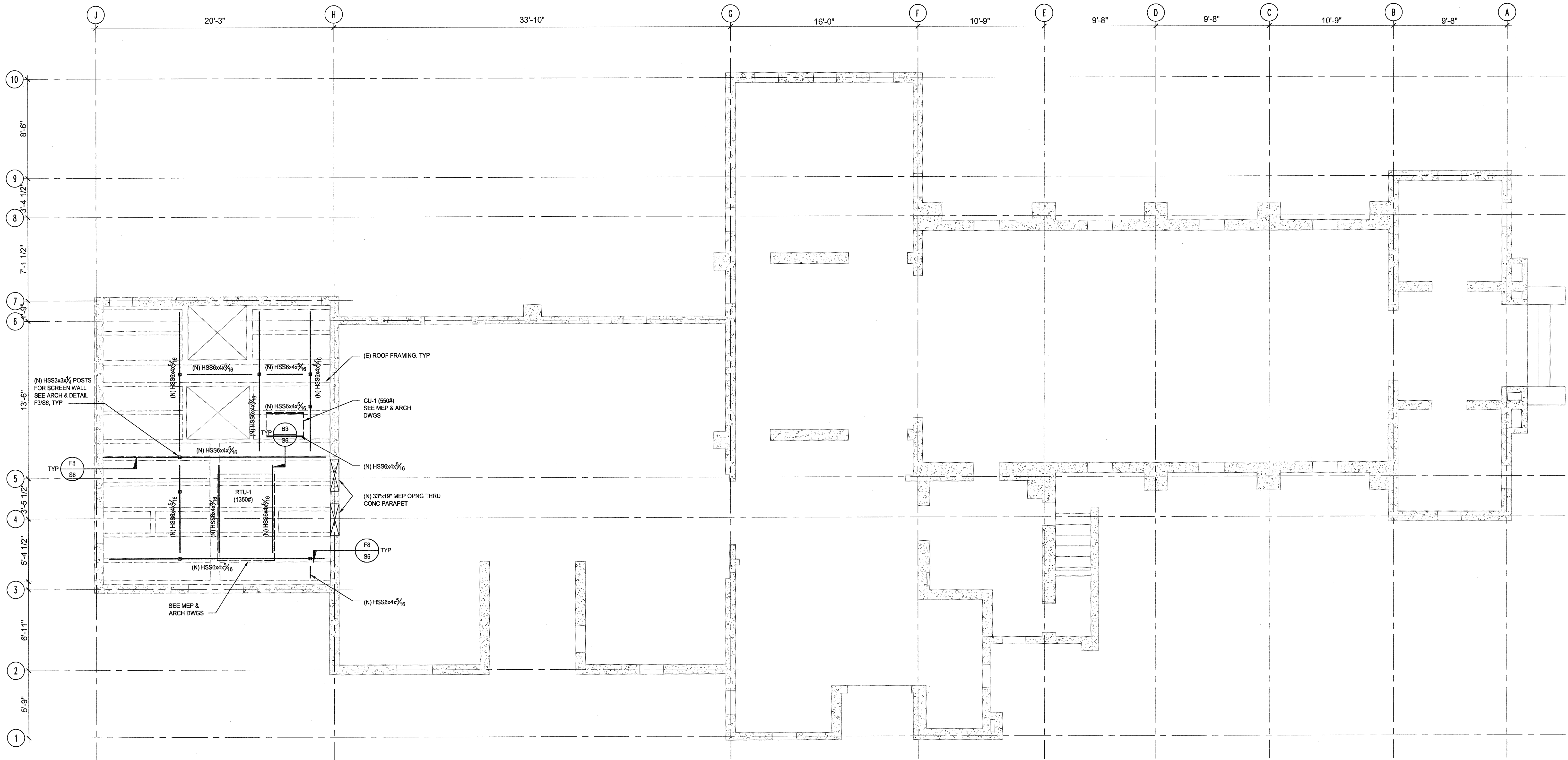
VA Project Number
898CM2032
Building Number
1001
Drawing Number
<b>S3</b>
Dwg. of

Office of Construction and Facilities Management	

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CD2 SUBMISSION - ISSUED FOR CONSTRUCTION

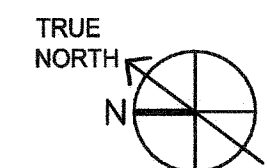
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three inches = one foot

K:\2015\115292 - VA LA NCA Chapel Renovation\3 SDR\A\S4 ROOF FRAMING PLAN.dwg 6-08-16 02:20:13 PM J.Chouhury



1 ROOF FRAMING PLAN  
SCALE = 1/4"=1'-0"

- NOTES:
- ALL (N) STEEL SHALL BE HOT DIPPED GALVANIZED.
  - LOCATE (E) REIN'S PRIOR TO DRILLING FOR (N) ANCHORS. (E) REIN'S SHALL NOT BE CUT TO INSTALL (N) ANCHORS. RELOCATE ANCHORS ACCORDINGLY.



No.	Description	Date

<b>CONSULTANTS:</b>		
STRUCTURAL ENGINEER		
KPFF		
6080 CENTER DRIVE, SUITE 300		
LOS ANGELES, CA 90045		
Tel 310-665-1536		

Seals and Signatures

<b>ARCHITECT/ENGINEERS:</b>	
<b>LEO A DALY</b>	
550 South Hope Street, 27 <sup>th</sup> Floor	
Los Angeles, California 90071, USA	
213-629-0100 F213-629-0070	
PLANNING ARCHITECTURE ENGINEERING INTERIORS	EST. 1915

Drawing Title
<b>ROOF FRAMING PLAN</b>
Approved Project Director

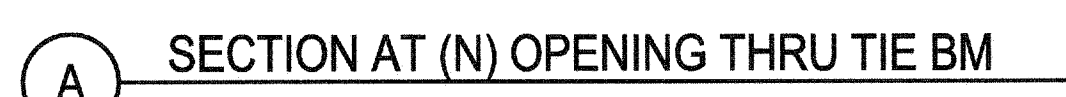
Project Title		
VA Los Angeles National Cemetery, Phase 1A		
Location	Los Angeles National Cemetery 950 South Sepulveda Boulevard Los Angeles, California 90049	
Date	Checked	Drawn
06-10-2016		

VA Project Number
898CM2032
Building Number
1001
Drawing Number
<b>S4</b>
Dwg. of

Office of Construction and Facilities Management	

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 Department of  
Veterans Affairs

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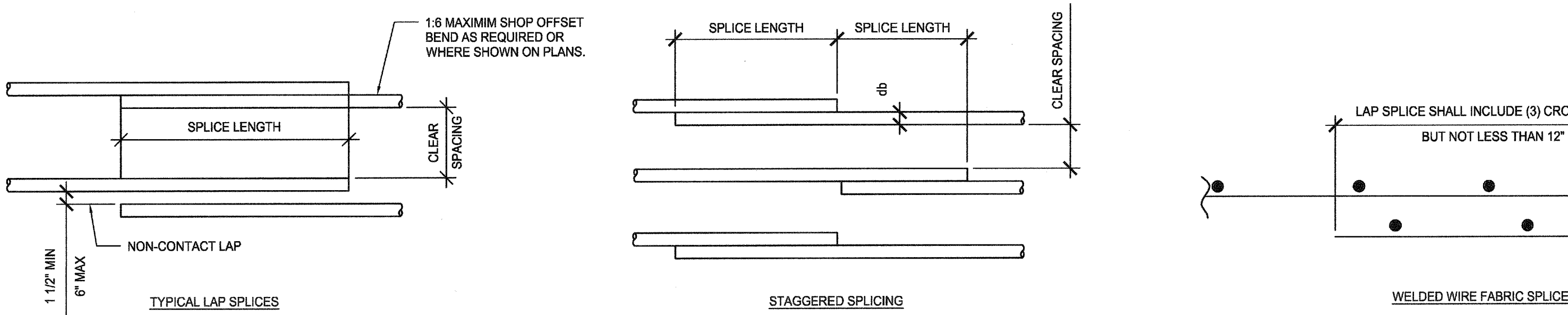
three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
one quarter inch = one foot  
three eighths inch = one foot  
one eighth inch = one foot

1 2 3 4 5 6 7 8 9

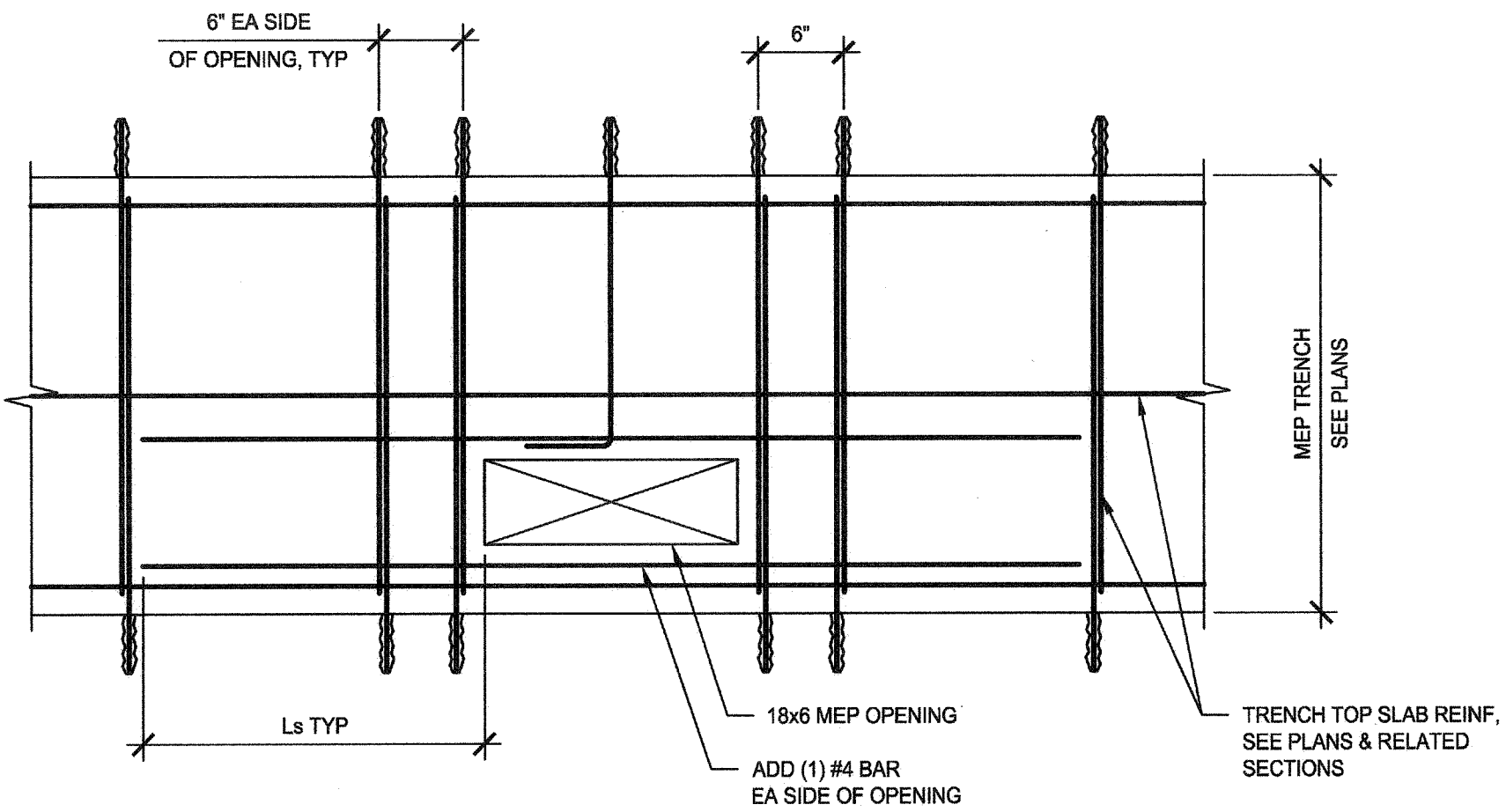
NON-SHEAR WALL REINFORCING BAR TENSION SPLICE LENGTH (GRADE 60)																
BAR DESCRIPTION	f <sub>c</sub> (psi)	BAR SIZE	#11		#10		#9		#8		#7		#6		#5	
			LAP CLASS	DEVELOPMENT LENGTH "L <sub>d</sub> "	LAP CLASS	DEVELOPMENT LENGTH "L <sub>d</sub> "	LAP CLASS	DEVELOPMENT LENGTH "L <sub>d</sub> "	LAP CLASS	DEVELOPMENT LENGTH "L <sub>d</sub> "	LAP CLASS	DEVELOPMENT LENGTH "L <sub>d</sub> "	LAP CLASS	DEVELOPMENT LENGTH "L <sub>d</sub> "	LAP CLASS	DEVELOPMENT LENGTH "L <sub>d</sub> "
CLEAR SPACING OF BARS NOT LESS THAN 4d. CLEAR COVER NOT LESS THAN 4d. AND STIRRUPS AND TIES THROUGHOUT IS NOT LESS THAN THE CODE MINIMUM OR CLEAR SPACING OF BARS NOT LESS THAN 2d. AND CLEAR COVER NOT LESS THAN 4d.	4000	NWC	TOP	7'-1"	9'-3"	6'-6"	8'-5"	5'-10"	7'-7"	5'-2"	6'-9"	4'-6"	5'-11"	3'-1"	4'-1"	2'-7"
			OTHER	5'-8"	7'-1"	5'-0"	6'-6"	4'-6"	5'-10"	4'-0"	5'-2"	3'-6"	4'-6"	2'-5"	3'-1"	2'-7"
	3000	NWC	TOP	8'-2"	10'-8"	7'-6"	9'-8"	6'-9"	8'-9"	6'-0"	7'-9"	4'-8"	6'-9"	3'-7"	4'-8"	2'-5"
			OTHER	6'-4"	8'-2"	5'-9"	7'-6"	5'-2"	6'-9"	4'-7"	6'-0"	4'-0"	5'-3"	2'-9"	3'-7"	2'-5"
	3000	LWC	TOP	6'-4"	8'-2"	5'-9"	7'-6"	5'-2"	6'-9"	4'-7"	6'-0"	4'-0"	5'-3"	2'-9"	3'-7"	2'-5"
			OTHER	4'-10"	6'-4"	4'-5"	5'-9"	4'-0"	5'-2"	3'-7"	4'-7"	3'-1"	4'-0"	2'-9"	1'-10"	2'-5"
OTHER CASES	4000	NWC	TOP	10'-8"	13'-10"	9'-8"	12'-8"	8'-9"	11'-5"	7'-9"	10'-2"	6'-9"	8'-10"	4'-8"	6'-1"	3'-11"
			OTHER	6'-2"	10'-8"	7'-5"	9'-8"	6'-9"	8'-9"	6'-0"	7'-9"	5'-3"	6'-9"	3'-7"	4'-8"	3'-1"
	3000	NWC	TOP	12'-3"	15'-11"	11'-2"	14'-6"	10'-1"	13'-1"	8'-11"	7'-10"	10'-2"	5'-5"	7'-0"	3'-6"	5'-10"
			OTHER	9'-5"	12'-3"	8'-7"	11'-2"	7'-9"	10'-1"	6'-11"	8'-11"	6'-0"	7'-10"	4'-2"	5'-5"	3'-7"
	3000	LWC	TOP	9'-5"	12'-3"	8'-7"	11'-2"	7'-9"	10'-1"	6'-11"	8'-11"	6'-0"	7'-10"	4'-2"	5'-5"	3'-7"
			OTHER	7'-3"	9'-5"	6'-7"	8'-7"	6'-0"	7'-9"	5'-4"	6'-11"	4'-8"	6'-0"	3'-2"	4'-2"	2'-9"

NOTES:

1. BAR SPLICES NOT COVERED BY THIS SCHEDULE ARE SPECIFICALLY DETAILED AND DIMENSIONED ON PLANS.
2. TOP BARS ARE HORIZONTAL REINFORCEMENT WITH MORE THAN 12" OF CONCRETE CAST BELOW BAR.
3. OTHER BARS ARE VERTICAL REINFORCEMENT, AND HORIZONTAL REINFORCEMENT WITH LESS THAN 12" OF CONCRETE CAST BELOW BAR.
4. COVER DESIGNATES CLEAR CONCRETE COVER FROM SPLICED BAR TO FACE OF MEMBER. SPACING DESIGNATES CENTER-TO-CENTER SPACING OF SPLICED BARS.
5. FOR SHEAR WALLS, DEVELOPMENT AND SPLICE LENGTHS OF VERTICAL BARS SHALL BE 1.25 TIMES THE SCHEDULED LENGTHS.

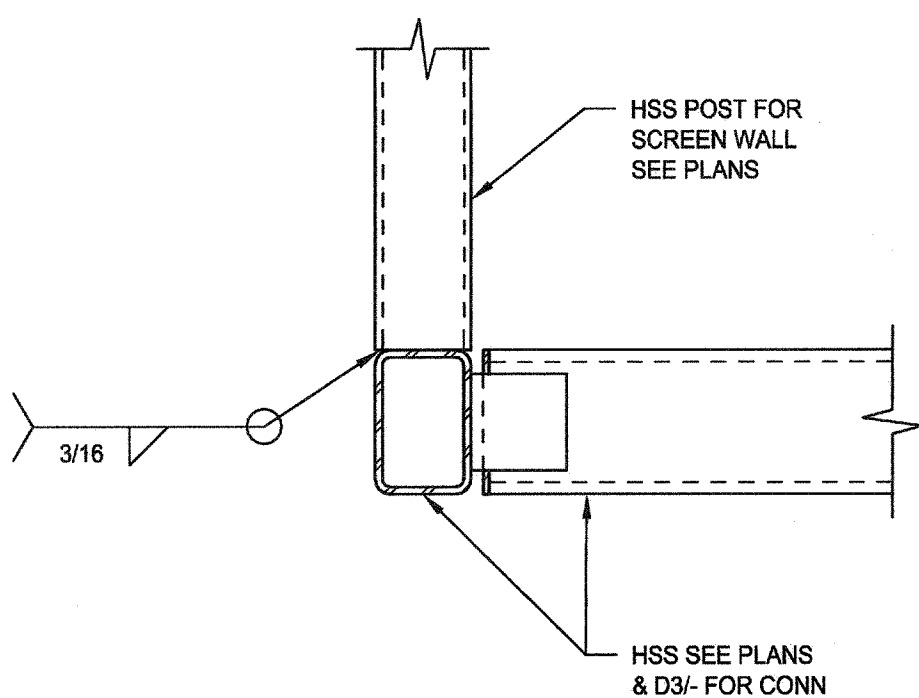


C1 DEVELOPMENT AND SPLICES OF CONCRETE REINFORCING BARS (NON SHEAR WALL)  
SCALE: 1"=1'-0"



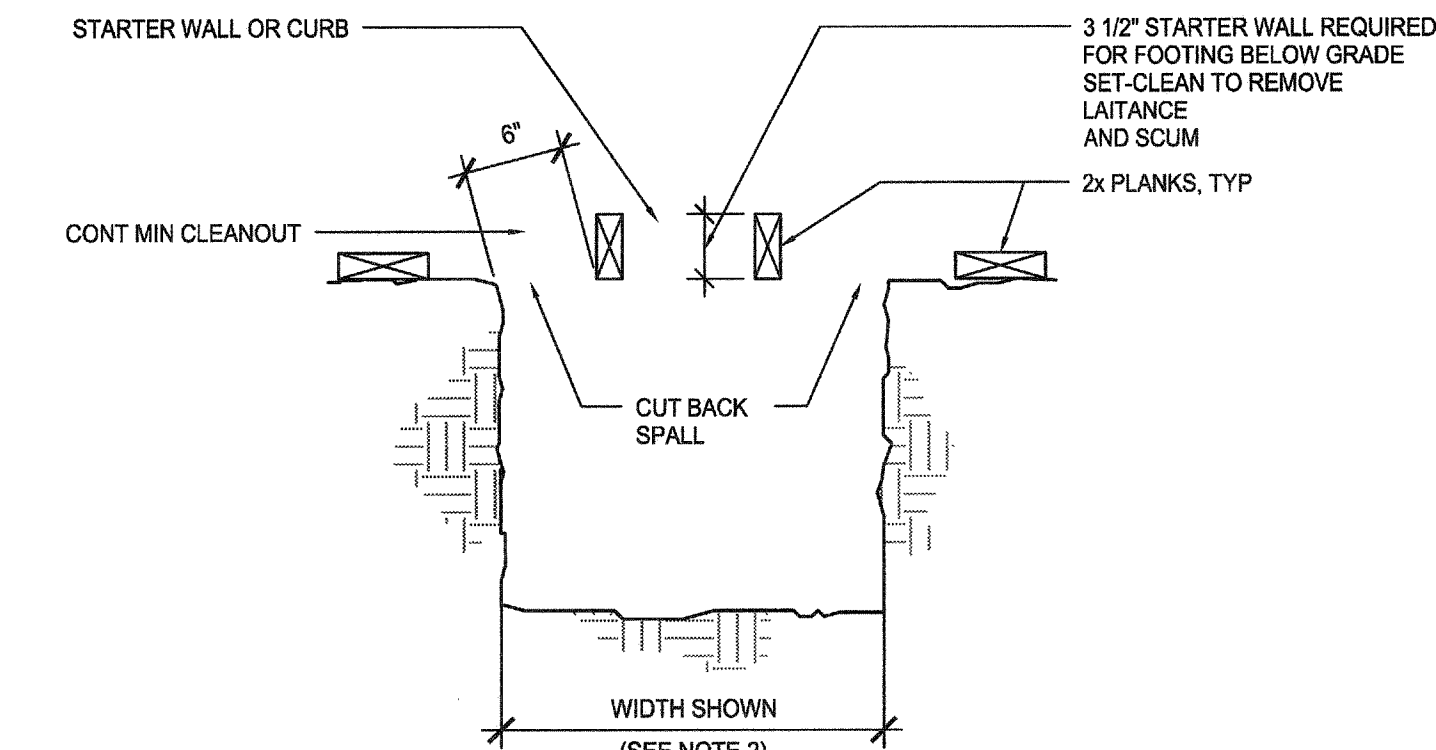
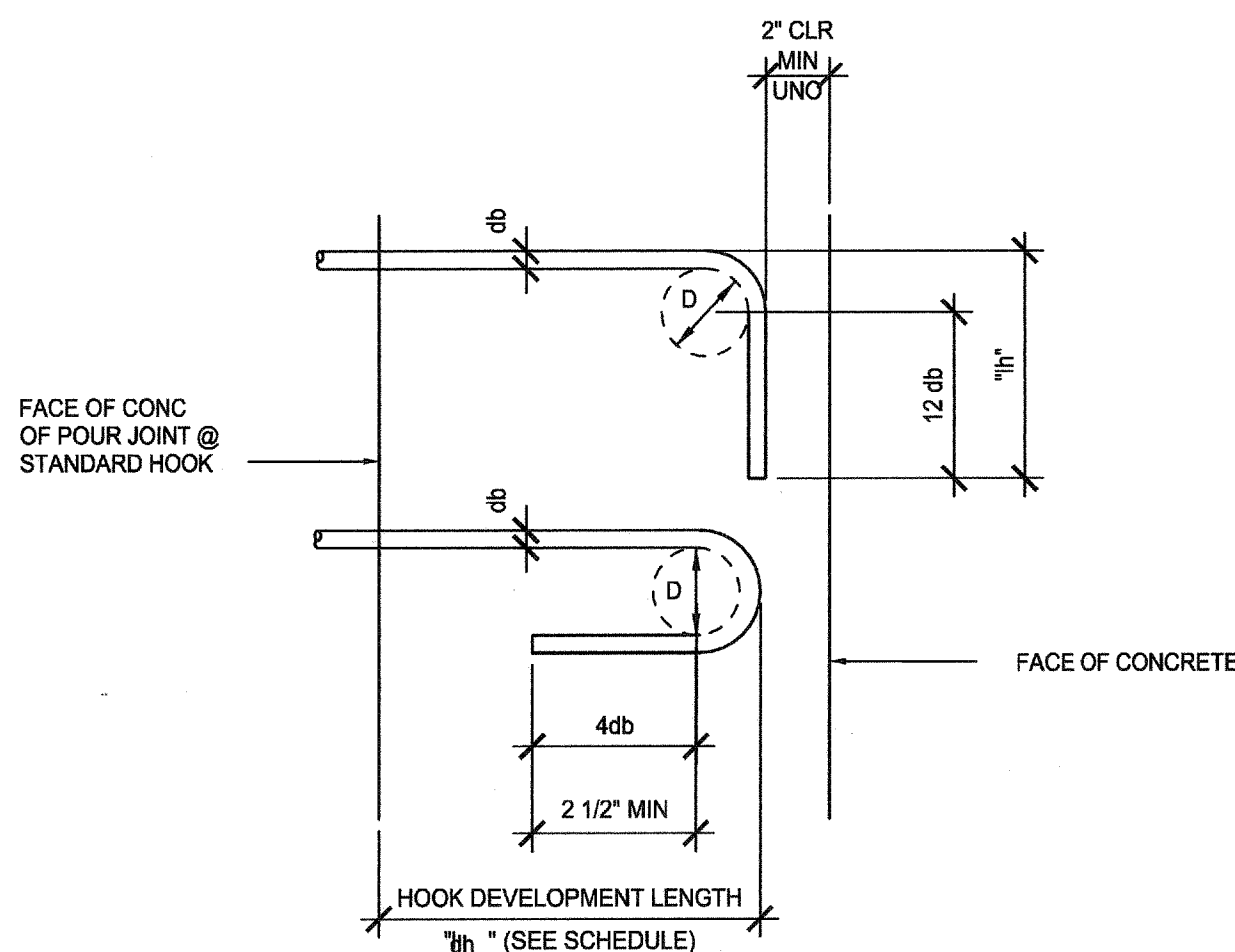
E1 TYPICAL REINFORCING AT MEP GRILL  
SCALE: 1"=1'-0"

D3 CONNECTION DETAIL  
SCALE: 1 1/2"=1'-0"

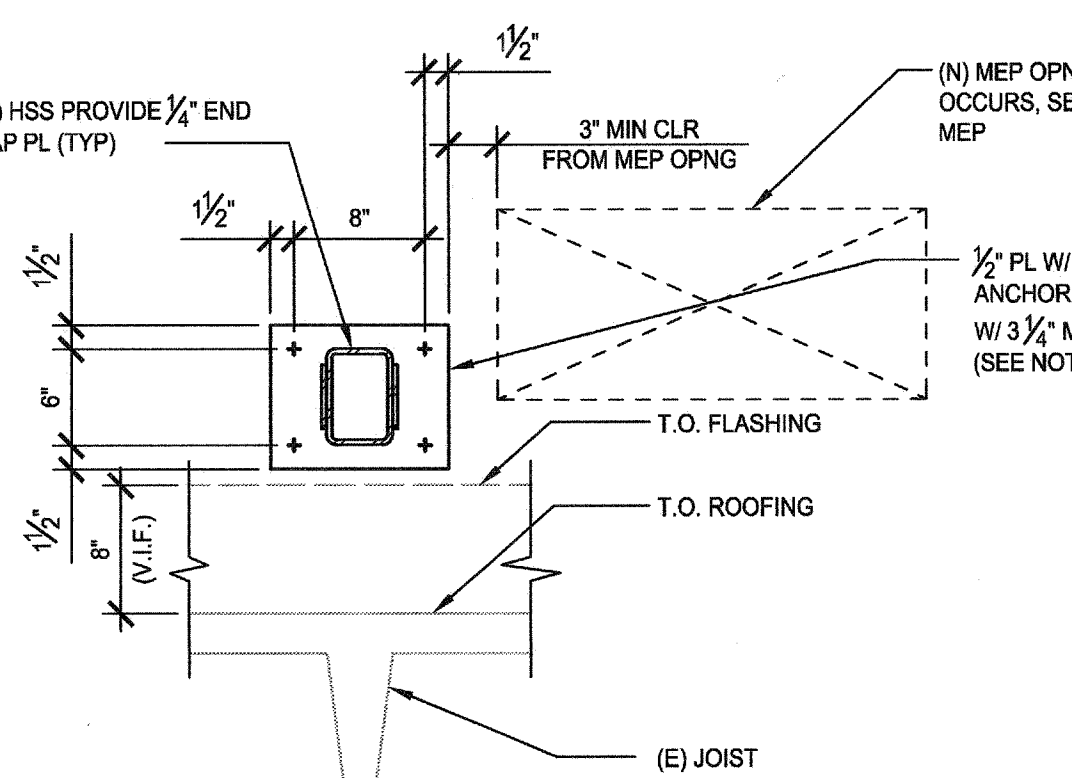


F3 CONNECTION DETAIL  
SCALE: 1 1/2"=1'-0"

B6 STANDARD HOOK DEVELOPMENT LENGTH BENDING DETAIL  
SCALE: 1"=1'-0"



D6 MANDATORY MINIMUM FRAMEWORK  
SCALE: 1"=1'-0"

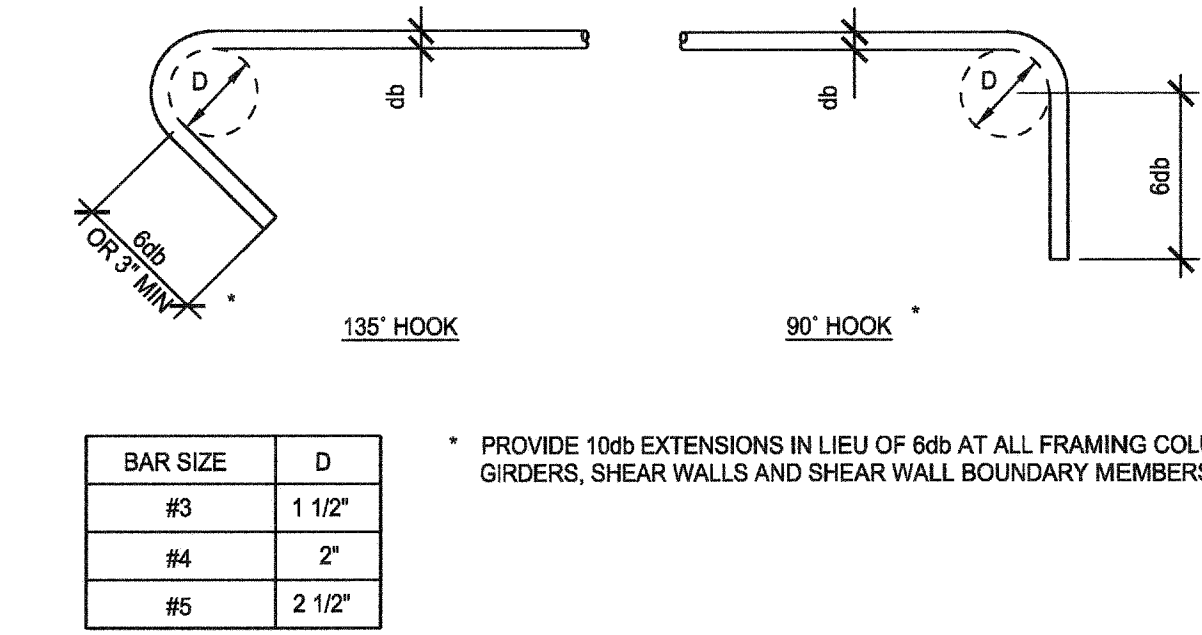


F6 SECTION  
SCALE: 1"=1'-0"

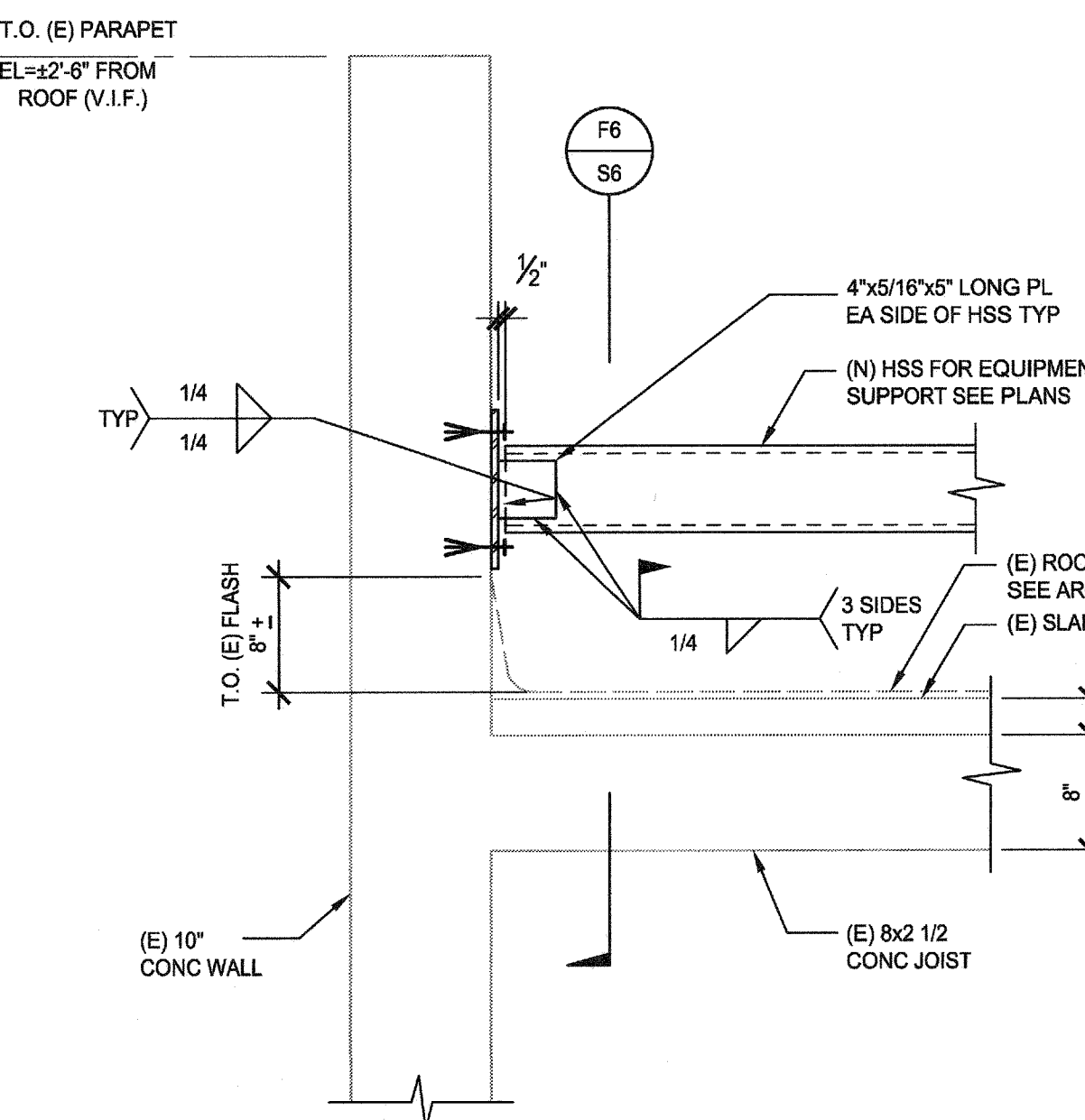
STANDARD HOOK DEVELOPMENT LENGTH "L <sub>d</sub> "								
BAR SIZE	D	f <sub>y</sub>	NORMAL WEIGHT			LIGHT WEIGHT		
			3000	4000	5000	3000	4000	5000
#3	2 1/4"	6"	0'-9"	0'-8"	0'-7"	0'-11"	0'-10"	0'-9"
#4	3"	8"	0'-11"	0'-10"	0'-9"	1'-3"	1'-1"	1'-0"
#5	3 3/4"	10"	1'-2"	1'-0"	0'-11"	1'-6"	1'-4"	1'-2"
#6	4 1/2"	12"	1'-5"	1'-3"	1'-1"	1'-10"	1'-7"	1'-5"
#7	5 1/4"	14"	1'-8"	1'-5"	1'-3"	2'-1"	1'-10"	1'-8"
#8	6"	16"	1'-10"	1'-7"	1'-5"	2'-5"	2'-1"	1'-11"
#9	9 1/2"	1'-7 1/2"	2'-1"	1'-10"	1'-8"	2'-9"	2'-4"	2'-1"
#10	10 3/4"	1'-10"	2'-4"	2'-1"	1'-10"	3'-1"	2'-8"	2'-5"
#11	12"	2'-0 1/2"	2'-7"	2'-3"	2'-0"	3'-5"	2'-11"	2'-8"

NOTES:

1. ALL HOOKED BARS SHALL EXTEND AS FAR AS POSSIBLE WITH A MINIMUM 2" END COVER AND WITH EMBEDMENT NOT LESS THAN SHOWN ON THE SCHEDULE. UNO ON PLANS.
2. MINIMUM SIDE COVER = 2 1/2".
3. "L<sub>d</sub>" MAY BE REDUCED BY 0.7 IF CONDITIONS OF NOTES 1 & 2 ARE MET.



D8 TIES & STIRRUPS DETAIL  
SCALE: 1"=1'-0"



F8 SECTION  
SCALE: 1"=1'-0"

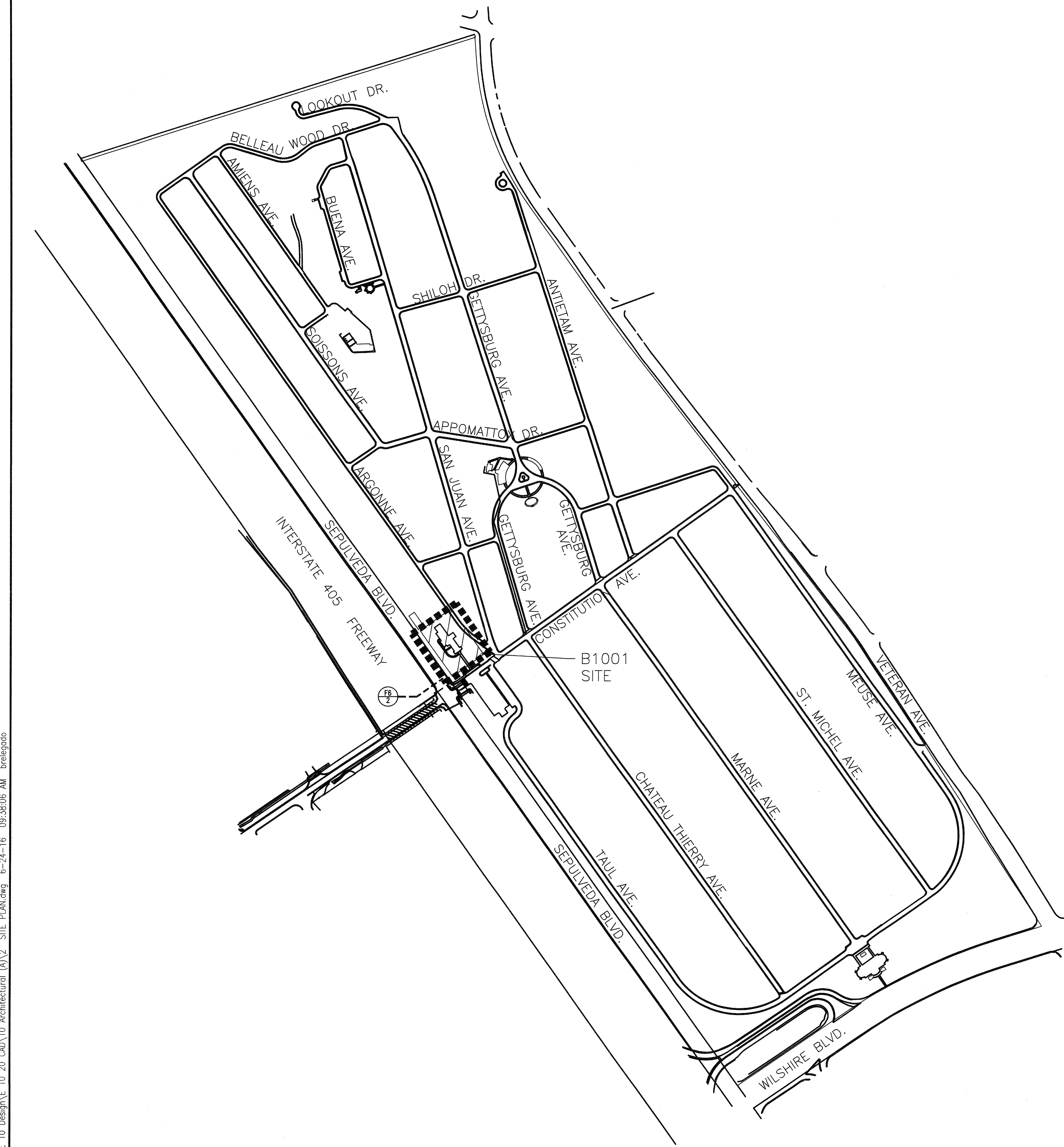
No.	Description	Date	CONSULTANTS: STRUCTURAL ENGINEER KPF 6080 CENTER DRIVE, SUITE 300 LOS ANGELES, CA 90045 Tel 310-665-1536	Seals and Signatures MICHAEL A. DIGNAM REGISTERED PROFESSIONAL ENGINEER STRUCTURAL STATE OF CALIFORNIA No. 4152 Exp. 06-18	ARCHITECT/ENGINEERS: LEO A DALY 550 South Hope Street, 27 <sup>th</sup> Floor Los Angeles, California 90071, USA 213-629-0100 F213-629-0070 EST. 1915	Drawing Title <b>DETAILS</b> Approved: Project Director	Project Title VA Los Angeles National Cemetery, Phase 1A Location Los Angeles National Cemetery 950 South Sepulveda Boulevard Los Angeles, California 90049 Date 06-10-2016 Checked Drawn	VA Project Number 898CM2032 Building Number 1001 Drawing Number <b>S6</b> Dwg. of	Office of Construction and Facilities Management Department of Veterans Affairs
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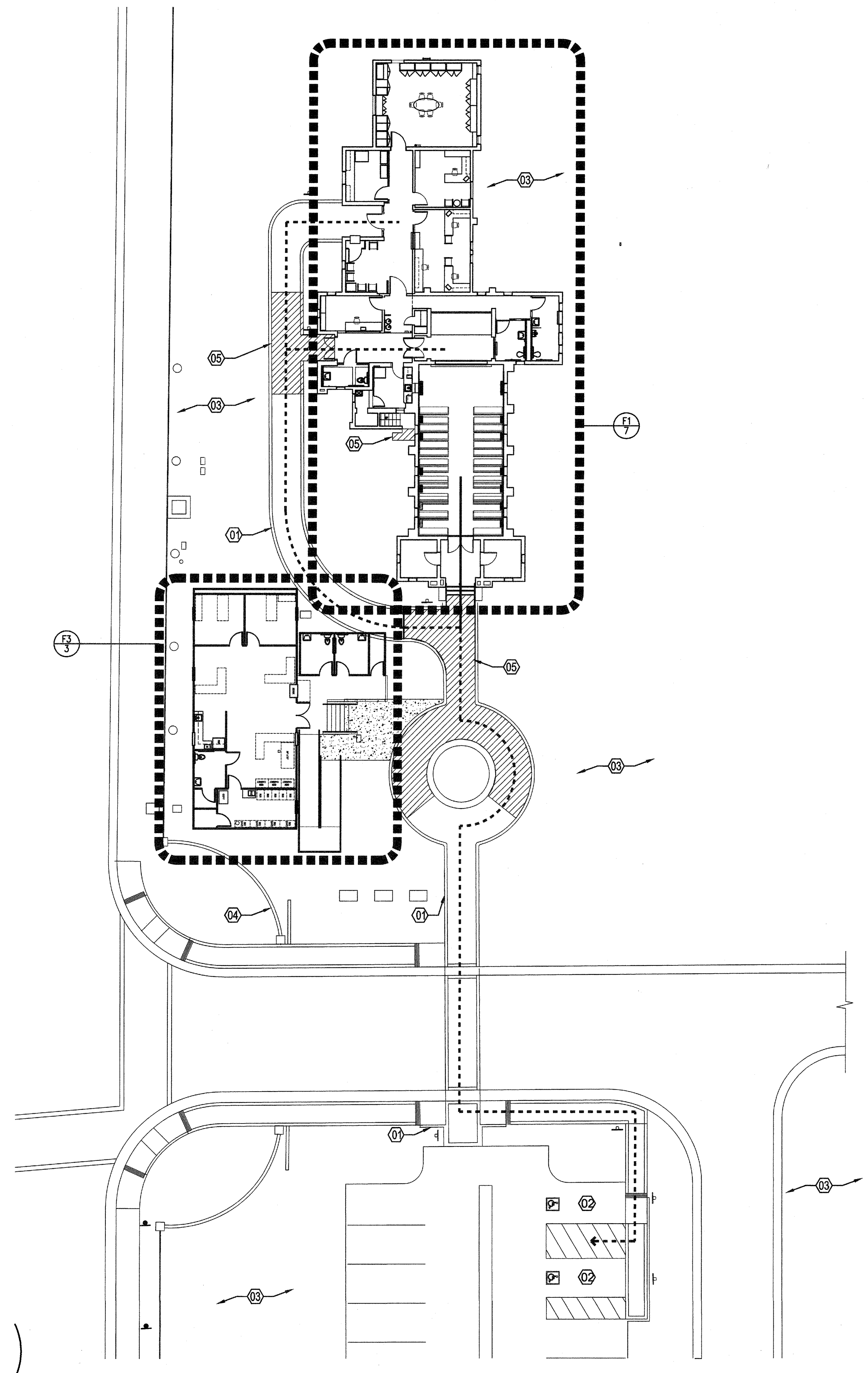




three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot  
one sixteenth inch = one foot



F1 PLAN - CAMPUS ARCHITECTURAL  
SCALE: NTS



F6 PLAN - SITE ARCHITECTURAL  
SCALE: 1/16" = 1'-0"

### SHEET NOTES

1. ALL DIMENSIONS ARE FROM FACE OF WALL FINISH UNLESS OTHERWISE NOTED.
2. REFER TO X5 AND X6 FOR ACCESSIBILITY NOTES AND DIAGRAM.
3. SEE SHEET X3 AND 1 FOR ARCHITECTURAL SYMBOLS AND NOTES

### KEYNOTES

- 01 EXISTING PAVEMENT
- 02 EXISTING ADA PARKING SPACES
- 03 EXISTING LANDSCAPE AREA
- 04 EXISTING MONUMENT SIGN
- 05 DEMO AND REPLACE PORTION OF BRICK WALKWAY, SEE CIVIL

### LEGEND

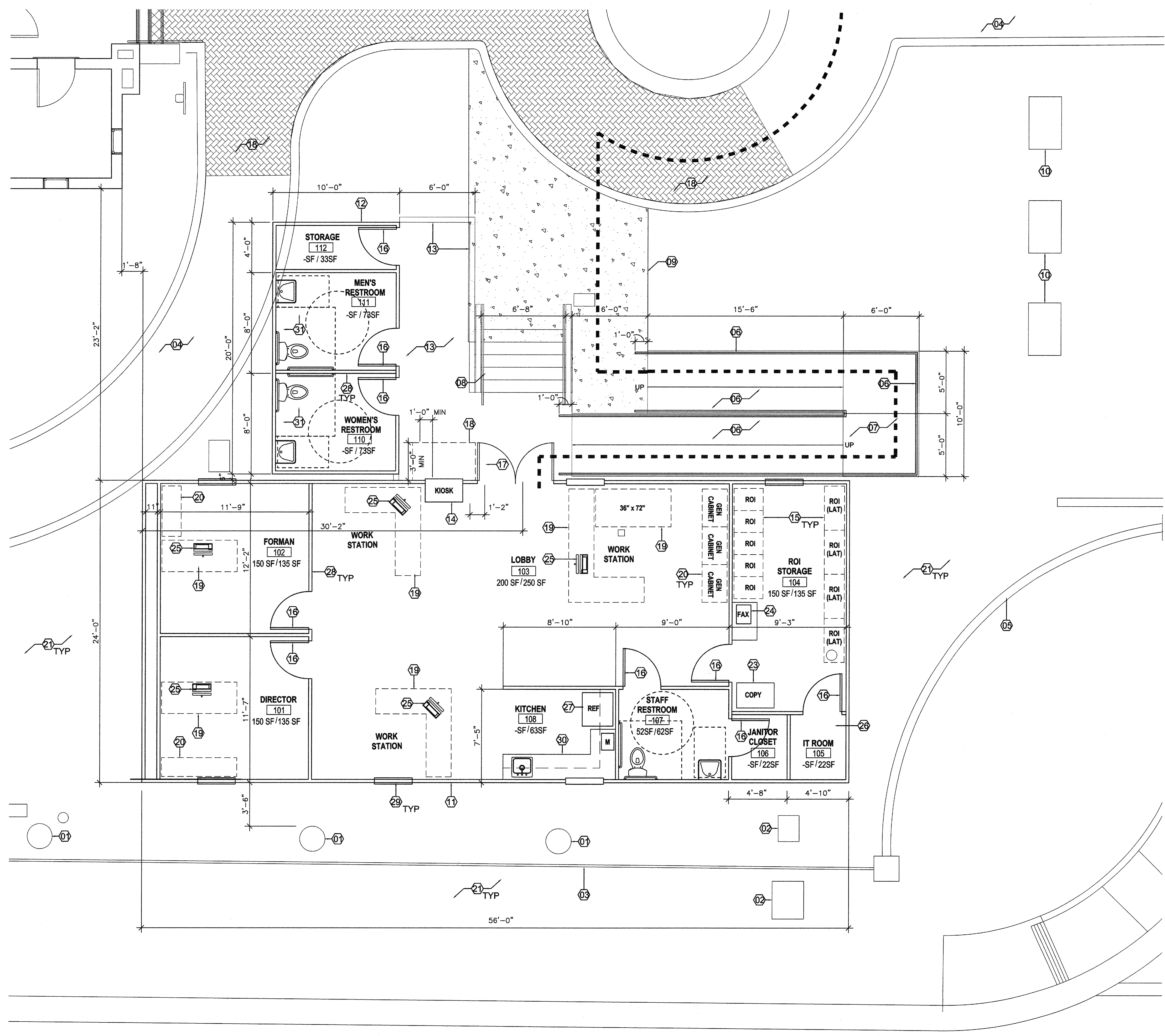
----- ACCESSIBLE PATH OF TRAVEL  
----- NON-ACCESSIBLE PATH OF TRAVEL

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No.	Description	Date																																			

NON-SPRINKLERED  
CD2 SUBMISSION - ISSUED FOR CONSTRUCTION



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one quarter inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
three quarters inch = one foot  
one inch = one foot  
one and one half inches = one foot  
two inches = one foot  
three inches = one foot



**F3 PLAN - TEMPORARY TRAILER**  
SCALE: 1/4" = 1'-0"

**SHEET NOTES**

1. ALL DIMENSIONS ARE FROM FACE OF WALL FINISH UNLESS OTHERWISE NOTED.
2. REFER TO X5 AND X6 FOR ACCESSIBILITY NOTES AND DIAGRAMS.
3. SEE SHEETS X3 AND 1 FOR ARCHITECTURAL SYMBOLS AND NOTES
4. ALL TEMPORARY TRAILERS SHALL BE PERMITTED WITH APPROPRIATE AGENCY HAVING JURISDICTION INCLUDING FOUNDATION, SEISMIC BRACING, INSTALLATION AND UTILITY CONNECTION AS PART OF BASE BID.
5. RE-LANDSCAPE AREAS WHERE TEMPORARY TRAILERS WERE INSTALLED DURING CONSTRUCTION
6. ALL FURNITURE WITHIN TEMPORARY TRAILERS SHALL BE RELOCATED FROM EXISTING ADMINISTRATION BUILDING. FURNITURE TO BE RELOCATED BY VA


**KEYNOTES**

- 01 TRIM AND PRUNE EXISTING TREES AS REQUIRED TO INSTALL TEMPORARY TRAILERS
- 02 EXISTING ELECTRICAL EQUIPMENT TO REMAIN, PROTECT IN PLACE
- 03 EXISTING WROUGHT IRON FENCE, PROTECT IN PLACE
- 04 EXISTING BRICK WALKWAY TO REMAIN, PROTECT IN PLACE
- 05 EXISTING LANDSCAPE WALL TO REMAIN, PROTECT IN PLACE
- 06 ACCESSIBLE RAMP, 1:12 SLOPE MAX., SEE C1/X5. PROVIDE WITH ACCESSIBLE HANDRAIL AND GUARDRAIL
- 07 LEVEL RAMP LANDING, 2% SLOPE MAX.
- 08 TEMPORARY STAIR, SEE D1, D2, AND E1/X5
- 09 TEMPORARY CONCRETE SLAB ON GRADE, 2% SLOPE MAX. PROVIDE 1/2" MAX. LEDGE AT ATTACHMENT TO EXISTING BRICK WALKWAY, SEE D4/X5
- 10 EXISTING CONCRETE MONUMENT SIGN, PROTECT IN PLACE
- 11 TEMPORARY MODULAR STAFF TRAILER 56'-0" L X 24'-0" W COORDINATE FINAL LOCATION PRIOR TO INSTALLATION. SEE SHEET NOTE NO. 4 ABOVE
- 12 TEMPORARY MODULAR TRAILER 20'-0" L X 10'-0" W FOR PUBLIC RESTROOM. COORDINATE FINAL LOCATION PRIOR TO INSTALLATION. SEE SHEET NOTE NO. 4 ABOVE
- 13 MODULAR DECK WITH 42" HIGH RAILING. INSTALL AS PART OF MODULAR TRAILER SYSTEM
- 14 TEMPORARY RELOCATE EXISTING GRAVE LOCATOR KIOSK. FRAME AND PROVIDE OPENING ALONG TRAILER WALL AS REQUIRED. PROVIDE POWER, DATA AND UTILITY CONNECTION AS REQUIRED. RELOCATE KIOSK AT CONCLUSION OF CHAPEL REMODEL BACK TO CHAPEL ORIGINAL LOCATION
- 15 TEMPORARY RELOCATED RECORD OF INTERMENT (ROI) CABINETS
- 16 3'-0" X 7'-0" DOOR
- 17 6'-0" X 7'-0" DOOR
- 18 HEAVY DUTY FABRIC AWNING ABOVE GRAVE LOCATOR KIOSK. PROVIDE WITH SIGNAGE ON VERTICAL FACE OF AWNING TO READ "GRAVELOCATOR" MIN. 12" HIGH
- 19 OFFICE DESKS RELOCATED FROM CHAPEL BUILDING
- 20 FILE / STORAGE CABINETS. TEMPORARILY RELOCATE FROM CHAPEL BUILDING
- 21 CAP / REDIRECT (E) IRRIGATION SYSTEM BELOW AND AROUND TRAILER AS REQUIRED PRIOR TO INSTALLATION OF TRAILER
- 22 AREA OF BRICK WALKWAY TO BE REPLACED. SEE CIVIL DRAWINGS
- 23 RELOCATE EXISTING COPIER FROM CHAPEL BUILDING. CONNECT TO POWER AND DATA AS REQUIRED
- 24 RELOCATE EXISTING FAX MACHINE FROM CHAPEL BUILDING. CONNECT TO POWER AND DATA AS REQUIRED
- 25 RELOCATE EXISTING CPU, MONITOR AND KEYBOARD FROM CHAPEL BUILDING. CONNECT TO POWER AND DATA AS REQUIRED
- 26 RELOCATE EXISTING I.T. SERVER RACK AND SERVER TO CHAPEL BUILDING TO SUPPORT WORKSTATIONS. CONNECT TO POWER AND DATA RELOCATED WORKSTATIONS. COPIER AND FAX AS REQUIRED TO MAKE OPERATIONAL.
- 27 RELOCATE REFRIGERATOR FROM CHAPEL BUILDING
- 28 PARTITION WALL, TYP
- 29 WINDOW, TYP
- 30 NEW LOWER AND UPPER KITCHEN CASEWORK. PROVIDE SINK WITH GARBAGE DISPOSAL. PROVIDE MICROWAVE
- 31 NEW TOILET TO INCLUDE ACCESSIBLE WATER CLOSET AND WALL MOUNTED SINK, GRAB BARS, TOILET SEAT, PAPER DISPENSER, TOILET PAPER DISPENSER, GRAB BARS, MIRROR AND SANITARY NAPKIN DISPOSAL AT WOMEN'S TOILET

**LEGEND**

- ACCESSIBLE PATH OF TRAVEL
- NON-ACCESSIBLE PATH OF TRAVEL

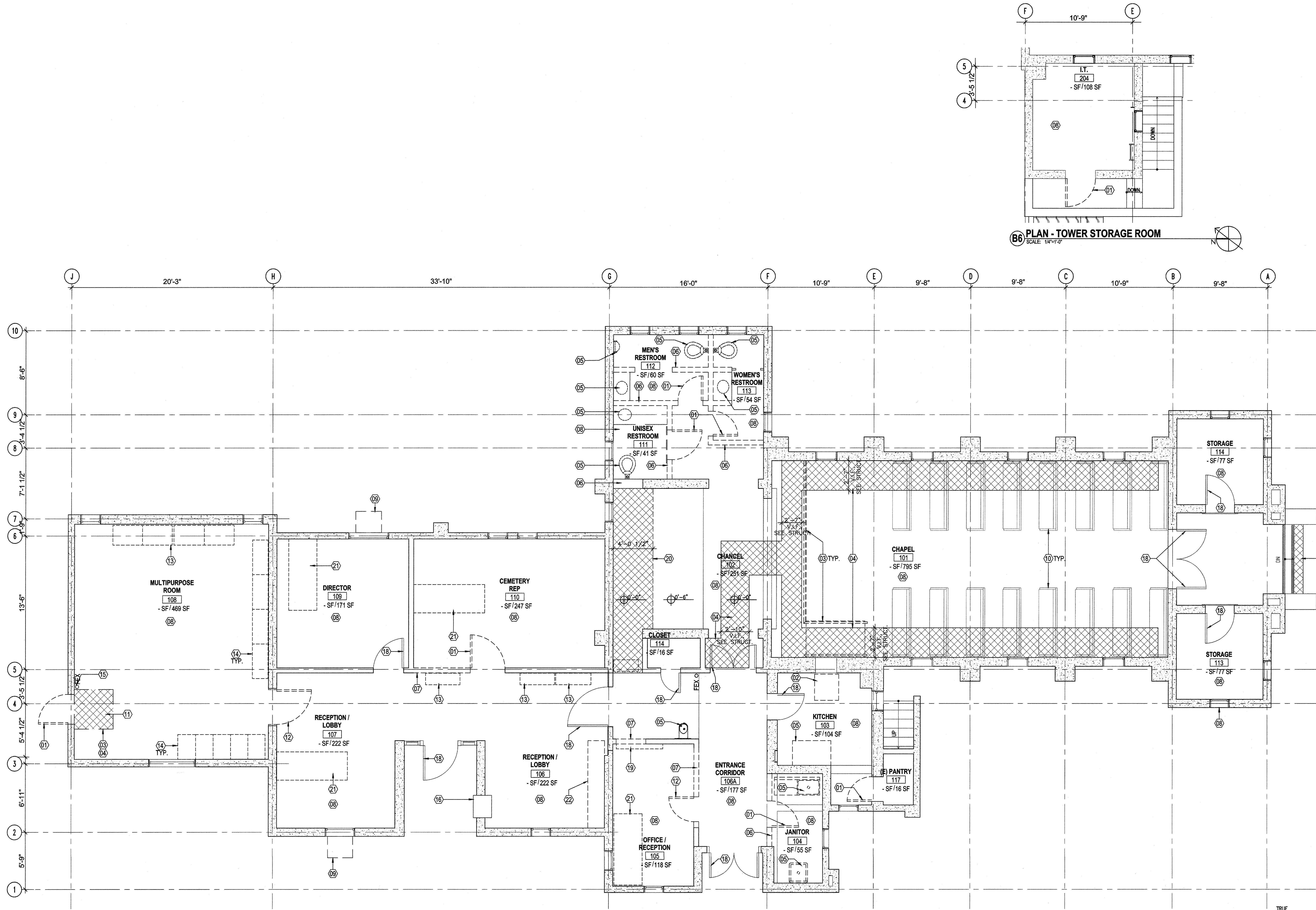
**NON-SPRINKLERED  
CD2 SUBMISSION - ISSUED FOR CONSTRUCTION**

No.	Description	Date	CONSULTANTS:	Seals and Signatures	ARCHITECT/ENGINEERS:	Drawing Title	Project Title	VA Project Number	Office of Construction and Facilities Management
					<div>LEO A DALY</div> <div>550 South Hope Street, 27th Floor Los Angeles, California 90071, USA 213-629-0100 F213-629-0070</div> <div>EST. 1915</div>	<b>PLAN - TEMPORARY TRAILER</b>	VA Los Angeles National Cemetery, Phase 1A	898CM2032	<div>Department of Veterans Affairs</div>
						Approved: Project Director	Location Los Angeles National Cemetery 950 South Sepulveda Boulevard Los Angeles, California 90049	Building Number 1001	
							Date 06-10-2016	Drawing Number 3	
							Checked	Drawn	Dwg. of

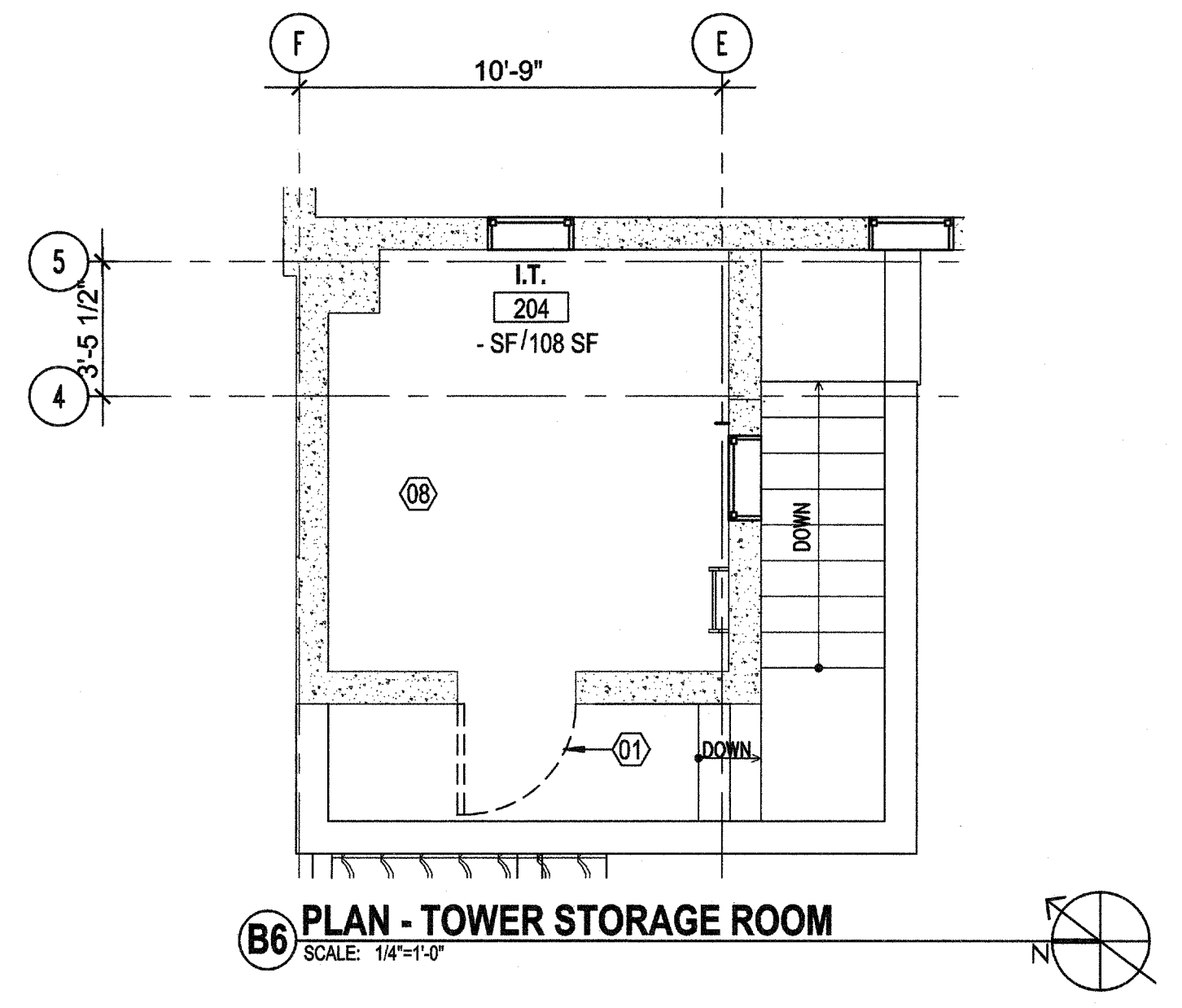


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one eighth inch = one foot

PLAN - DEMOLITION FIRST FLOOR.dwg 6-24-16 10:10:21 AM  
J:\046-10073-000 VA WLA Chapel\10 Architectural (A)\4 PLAN - DEMOLITION FIRST FLOOR.dwg 6-24-16 10:10:21 AM  
J:\046-10073-000 VA WLA Chapel\10 Architectural (A)\4 PLAN - DEMOLITION FIRST FLOOR.dwg 6-24-16 10:10:21 AM



F1 PLAN - DEMOLITION FIRST FLOOR  
SCALE: 1/4" = 1'-0"



B6 PLAN - TOWER STORAGE ROOM  
SCALE: 1/4" = 1'-0"

SHEET NOTES

1. CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS SHOWN FOR EXISTING STRUCTURE.
2. DEMOLITION OF ALL PAINTED SURFACES (WINDOWS, DOORS, ETC) ARE TO BE ABATED FOLLOWING MILLENNIUM CONSULTING ASSOCIATES EDITED "DEPARTMENT OF VETERANS AFFAIRS MASTER SPECIFICATIONS, FACILITY CONSTRUCTION SUBGROUP, DIVISION 02- EXISTING CONDITIONS, VA 02 83 13 LEAD-BASED PAINT REMOVAL AND DISPOSAL".
3. PRIOR TO COMMENCEMENT OF DEMOLITION, ALL ASBESTOS CONTAINING MATERIALS TO BE ABATED FOLLOWING MILLENNIUM CONSULTING ASSOCIATES EDITED "DEPARTMENT OF VETERANS AFFAIRS MASTER SPECIFICATIONS, FACILITIES CONSTRUCTION SUBGROUP, DIVISION 02 - EXISTING CONDITIONS, VA 02 83 13.19 ASBESTOS FLOOR TILE AND MASTIC ABATEMENT AND VA 02 83 13.13 GLOVEBOX ASBESTOS ABATEMENT WITH REFERENCE TO APPENDIX A OF THE SPECIFICATIONS, "ASBESTOS ABATEMENT WORK PLAN".
4. DEMOLITION OF EXISTING PARTITIONS AND FINISHES MAY UNCOVER VARIOUS THICKNESSES OF EXISTING TOPPING CONCRETE OVER THE EXISTING STRUCTURAL SLAB. PORTIONS OF EXISTING TOPPING CONCRETE THAT ARE FIRMLY ATTACHED TO EXISTING SLAB TO REMAIN, CRACKED OR DELAMINATED PORTIONS TO BE REMOVED.
5. ALL STRUCTURAL MEMBERS MUST REMAIN UNLESS OTHERWISE INDICATED ON THE DRAWINGS. PROTECT IN PLACE STRUCTURAL FRAMING, COLUMNS, AND CONCRETE SHEAR WALLS DURING DEMOLITION.
6. PERIMETER OF BUILDING BELOW GRADE TO BE EXCAVATED TO TOP OF FOOTING FOR INSTALLATION OF NEW BELOW GRADE WATERPROOFING.
7. AT ALL AREAS OF DEMOLITION, PATCH AND REPAIR AS REQUIRED MATCHING EXISTING OR MAKING READY TO ACCEPT NEW FINISHES.
8. COORDINATE REMOVAL OF ALL EXISTING EQUIPMENT WITH THE OWNER.
9. SEE SPEC. SECTION 08 71 00 FOR EXISTING DOOR SCOPE OF DEMOLITION.



KEYNOTES

- 01 REMOVE DOOR AND FRAME ASSEMBLY
- 02 REMOVE KITCHEN EQUIPMENT
- 03 REMOVE INTERIOR RAMP AND RAILINGS
- 04 REMOVE 6" CONCRETE SLAB
- 05 REMOVE PLUMBING FIXTURES (SINK, WATER CLOSET, URINAL, BATHTUB, SHOWER, MOP SINK, OR DRINKING FOUNTAIN), COUNTERTOP, TOILET PARTITIONS AND ACCESSORIES, TYPICAL
- 06 REMOVE INTERIOR PARTITION WALLS INCLUDING ALL WALL FINISHES AND BASE AND FRAMING, TYPICAL
- 07 REMOVE PORTION OF INTERIOR PARTITION FOR NEW OPENING.
- 08 REMOVE FLOOR FINISHES
- 09 REMOVE WINDOW MOUNTED AC UNIT, SUPPORT, PIPING AND ACCESSORIES
- 10 REMOVE EXISTING WOOD PEWS, STORE FOR REINSTALLATION.
- 11 PATCH (E) CONCRETE SLAB TO MATCH ADJACENT SLAB.
- 12 SALVAGE (E) DOOR AND FRAME FOR REINSTALLATION.
- 13 REMOVE AND RELOCATE EXISTING METAL STORAGE CABINETS TO TEMPORARY TRAILER
- 14 REMOVE AND RELOCATE EXISTING R.O.I. METAL STORAGE CABINETS IN R.O.I. STORAGE AREA AT TEMPORARY TRAILER.
- 15 REMOVE AND RELOCATE EXISTING FIRE EXTINGUISHER.
- 16 TEMPORARILY RELOCATE EXISTING GRAVE LOCATOR KIOSK TO TEMPORARY TRAILER. TEMPORARILY PATCH / BOARD CAP EXISTING WALL AT KIOSK OPENING.
- 17 DEMOLISH EXISTING LAST STEP, SEE CIVIL.
- 18 EXISTING DOORS TO REMAIN, PROTECT IN PLACE.
- 19 REMOVE / DEMOLISH EXISTING TELEPHONE BOARD.
- 20 REMOVE EXISTING WOOD RAISED FLOOR ASSEMBLY TO EXPOSED EXISTING CONCRETE SLAB BELOW.
- 21 REMOVE AND RELOCATE EXISTING DESK/ OFFICE FURNITURE TO TEMPORARY TRAILER
- 22 REMOVE EXISTING CASEWORK

LEGEND

- EXISTING CONSTRUCTION TO BE DEMOLISHED
- EXISTING CONSTRUCTION TO REMAIN IN PLACE
- EXISTING CONCRETE FLOOR SLAB TO BE DEMOLISHED

NON-SPRINKLERED  
CD2 SUBMISSION - ISSUED FOR CONSTRUCTION

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Department of  
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